

From: Chernyshev, Olga
Sent: Thursday, November 18, 2004 8:58 AM
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Subject: 09/899,815, sequence search request

Please search SEQ ID NO: 1 in regular and pending databases.

Thank you very much!

Olga N. Chernyshev, Ph.D.
AU 1646
4D84
2-0870
mail 4C70

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(STIC)

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Searcher: _____
Searcher Phone: 2-
Date Searcher Picked up: 11/10/04
Date Completed: 11/10/04
Searcher Prep/Rev. Time: _____
Online Time: _____

Type of Search
NA Sequence: # _____
AA Sequence :# _____
Structure: # _____
Bibliographic: _____
Litigation: _____
Patent Family: _____
Other: _____

Vendors and cost where applicable
STN: _____
DIALOG: _____
QUESTEL/ORBIT: _____
LEXIS/NEXIS: _____
SEQUENCE SYSTEM: _____
WWW/Internet: _____
Other(Specify): _____

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OM protein - protein search, using SW model

Run on:

November 19, 2004, 15:45:45 ; Search time 38 Seconds

Title: US-09-899-815-1
Perfect score: 218
Sequence: 1 DAEFRHDSGYEVHQLVFF... DVGSNKGAIIGLMVGCVIA 42

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0

Maximum DB seq length: 0¹
Post-processing: Minimum Match 0²
listing first 45 summaries

Database : PIR_79,*
1: pi1;*
2: pi2;*
3: pi3;*
4: pi4;*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	210	96.3	42	P0N512	beta-amyloid protein - guinea pig (fragment)
2	210	96.3	57	A60045	beta-amyloid protein
3	210	96.3	57	F60045	Alzheimer's disease
4	210	96.3	57	D60045	Alzheimer's disease
5	210	96.3	57	E60045	Alzheimer's disease
6	210	96.3	57	G60045	Alzheimer's disease
7	210	96.3	57	H60045	Alzheimer's disease
8	210	96.3	82	PQ0438	Alzheimer's disease
9	210	96.3	695	A49795	Alzheimer's disease
10	210	96.3	770	Q8HUA4	Alzheimer's disease
11	210	87.6	695	A27485	Alzheimer's disease
12	191	87.6	695	S00550	Alzheimer's disease
13	191	87.6	749	J0773	Alzheimer's disease
14	126	57.8	33	S23094	beta-amyloid protein
15	58.5	26.8	165	H90519	ABC transporter at
16	58	26.6	946	J5667	multidrug resistant
17	57	26.1	327	S11435	general polyprotein
18	57	26.1	503	S73843	general amino acid
19	56.5	25.9	378	S67192	SG1 protein - Yea
20	56	25.7	755	A13229	tryptophan 2-mono
21	55.5	25.5	832	H84848	phospholipase D (1)
22	55	25.2	494	2	probable cobQ protein
23	55	25.2	539	2	ABC transporter (A
24	55	25.2	755	1	tryptophan 2-mono
25	55	25.2	3063	2	tryptophan 2-mono
26	54	24.8	77	2	tryptophan 2-mono
27	54	24.8	284	2	tryptophan 2-mono
28	54	24.8	755	1	tryptophan 2-mono
29	54	24.8	889	2	TonB-dependent rec

ALIGNMENTS

RESULT 1

PN0512 beta-amyloid protein - guinea pig (fragment)

C;Species: *Canis lupus familiaris* (guinea pig)

C;Accession: P0N512 #sequence_revision 31-Dec-1993 #text_change 09-Jul-2004

R;Shimomigashi, Y.; Matsumoto, H.; Takano, Y.; Saito, R.; Iwata, T.; Kamiya, H.; Ohno, B.; Biochem. Biophys. Res. Commun. 193, 624-630, 1993

A;Title: Receptor-mediated specific biological activity of a beta-amyloid protein fragment

A;Reference number: P0N512; MUID:93290653; PMID:7685598

A;Accession: P0N512

A;Molecule type: protein

A;Residues: 1-42 <SH1>

A;Cross-references: UNIPROT:Q7M088

C;Superfamily: Alzheimer's disease amyloid beta protein; animal Kunitz-type proteinase

C;Keywords: alternative splicing; amyloid

Query Match Best Local Similarity 96.3%; Score 210; DB 2; Length 42; Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

1 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

2 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

3 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

4 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

5 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

6 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

7 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

8 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

9 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

10 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

11 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

12 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

13 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

14 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

15 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

16 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

17 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

18 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

19 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

20 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

21 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

22 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

23 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

24 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

25 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

26 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

27 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

28 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

29 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGCVIA 42

hypothetical protein
cell division ATP-
cell division prot
hypothetical prote
hypothetical prote
conserved hypothet
polyprotein - pote
hypothetical prote
formylmethanofuran
probable membrane
ABC transporter AT
ATP-binding transp
hypothetical prote
signal transductio
fatty aldehyde deh
probable phospholi

RESULT 3

F60045 Alzheimer's disease amyloid beta/A4 protein precursor - pig (fragment)

C;Species: Sub scrofa domesticus (domestic pig)

C;Date: 01-Dec-1992 #sequence_revision 01-Dec-1992 #text_change 13-Aug-1999

R;Johnstone, E.M.; Chaney, M.O.; Norris, F.H.; Pascual, R.; Little, S.P.

A;Title: Conservation of the sequence of the Alzheimer's disease amyloid peptide in dog, brain. Mol. Brain Res. 10, 299-305, 1991

A;Reference number: A60045; MUID:92017079; PMID:1656157

A;Accession: F60045

A;Molecule type: mRNA

A;Residues: 1-57 <JOH>

A;Cross-references: EMBL:X56127; NID:q1895; PIDN:CAA39592.1; PID:q1896

C;Keywords: alternative splicing; Alzheimer's disease; amyloid; brain

Query Match

Best Local Similarity 96.3%; Score 210; DB 2; Length 57;

Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 DAERFRHDSGYEVHQKLVFFAGDVGNSNKGAIIGLMVGCVIA 42

Db 6 DAERFRHDSGYEVHQKLVFFAGDVGNSNKGAIIGLMVGCVIA 47

RESULT 4

D60045 Alzheimer's disease amyloid beta/A4 protein precursor - bovine (fragment)

C;Date: 01-Dec-1992 #sequence_revision 01-Dec-1992 #text_change 28-Jul-1995

C;Accession: D60045

R;Johnstone, E.M.; Chaney, M.O.; Norris, F.H.; Pascual, R.; Little, S.P.

A;Title: Conservation of the sequence of the Alzheimer's disease amyloid peptide in dog, brain. Mol. Brain Res. 10, 299-305, 1991

A;Reference number: A60045; MUID:92017079; PMID:1656157

A;Accession: D60045

A;Molecule type: mRNA

A;Residues: 1-57 <JOH>

A;Cross-references: EMBL:X56124

C;Superfamily: Alzheimer's disease amyloid beta protein; animal Kunitz-type proteinase i

C;Keywords: alternative splicing; Alzheimer's disease; amyloid; brain

Query Match

Best Local Similarity 96.3%; Score 210; DB 2; Length 57;

Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 DAERFRHDSGYEVHQKLVFFAGDVGNSNKGAIIGLMVGCVIA 42

Db 6 DAERFRHDSGYEVHQKLVFFAGDVGNSNKGAIIGLMVGCVIA 47

RESULT 5

E60045 Alzheimer's disease amyloid beta/A4 protein precursor - sheep (fragment)

C;Species: Ovis sp. (sheep)

C;Date: 01-Dec-1992 #sequence_revision 01-Dec-1992 #text_change 28-Jul-1995

C;Accession: E60045

R;Johnstone, E.M.; Chaney, M.O.; Norris, F.H.; Pascual, R.; Little, S.P.

A;Title: Conservation of the sequence of the Alzheimer's disease amyloid peptide in dog, brain. Mol. Brain Res. 10, 299-305, 1991

A;Reference number: A60045; MUID:92017079; PMID:1656157

A;Accession: E60045

A;Molecule type: mRNA

A;Residues: 1-57 <JOH>

A;Cross-references: EMBL:X56130

C;Superfamily: Alzheimer's disease amyloid beta protein; animal Kunitz-type proteinase i

C;Keywords: alternative splicing; Alzheimer's disease; amyloid; brain

Query Match

Best Local Similarity 96.3%; Score 210; DB 2; Length 57;

Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 DAERFRHDSGYEVHQKLVFFAGDVGNSNKGAIIGLMVGCVIA 42

Db 6 DAERFRHDSGYEVHQKLVFFAGDVGNSNKGAIIGLMVGCVIA 47

RESULT 6

G60045 Alzheimer's disease amyloid beta/A4 protein precursor - guinea pig (fragment)

C;Species: Cavia porcellus (guinea pig)

C;Date: 01-Dec-1992 #sequence_revision 01-Dec-1992 #text_change 28-Jul-1995

C;Accession: G60045

R;Johnstone, E.M.; Chaney, M.O.; Norris, F.H.; Pascual, R.; Little, S.P.

A;Title: Conservation of the sequence of the Alzheimer's disease amyloid peptide in dog, brain. Mol. Brain Res. 10, 299-305, 1991

A;Reference number: A60045; MUID:92017079; PMID:1656157

A;Accession: G60045

A;Molecule type: mRNA

A;Residues: 1-57 <JOH>

A;Cross-references: EMBL:X56126

C;Superfamily: alternative splicing; Alzheimer's disease; amyloid; brain

C;Keywords: alternative splicing; Alzheimer's disease; amyloid; brain

Query Match

Best Local Similarity 96.3%; Score 210; DB 2; Length 57;

Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 DAERFRHDSGYEVHQKLVFFAGDVGNSNKGAIIGLMVGCVIA 42

Db 6 DAERFRHDSGYEVHQKLVFFAGDVGNSNKGAIIGLMVGCVIA 47

RESULT 7

B60045 Alzheimer's disease amyloid beta/A4 protein precursor - polar bear (fragment)

C;Species: Ursus maritimus (polar bear)

C;Date: 01-Dec-1992 #sequence_revision 01-Dec-1992 #text_change 09-Jul-2004

C;Accession: B60045

R;Johnstone, E.M.; Chaney, M.O.; Norris, F.H.; Pascual, R.; Little, S.P.

A;Title: Conservation of the sequence of the Alzheimer's disease amyloid peptide in dog, brain. Mol. Brain Res. 10, 299-305, 1991

A;Reference number: A60045; MUID:92017079; PMID:1656157

A;Accession: B60045

A;Molecule type: mRNA

A;Residues: 1-57 <JOH>

A;Cross-references: UNIPROT:Q29149; EMBL:X56128; NID:g2165; PIDN:CAA39593.1; PID:g2166

C;Superfamily: Alzheimer's disease amyloid beta protein; animal Kunitz-type proteinase i

C;Keywords: alternative splicing; Alzheimer's disease; amyloid; brain

Query Match

Best Local Similarity 96.3%; Score 210; DB 2; Length 57;

Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 DAERFRHDSGYEVHQKLVFFAGDVGNSNKGAIIGLMVGCVIA 42

Db 6 DAERFRHDSGYEVHQKLVFFAGDVGNSNKGAIIGLMVGCVIA 47

RESULT 8

PQ0438 Alzheimer's disease amyloid A4 protein precursor - rabbit (fragment)

C;Species: Oryctolagus cuniculus (domestic rabbit)

C;Date: 30-Sep-1993 #sequence_revision 19-Oct-1995 #text_change 19-Oct-1995

C;Accession: PQ0438; C60045

R;Davidson, J.S.; West, R.L.; Kotikalapudi, P.; Maroun, L.E.

A;Title: Sequence and methylation in the beta/A4 region of the rabbit amyloid precursor protein. Biochem. Biophys. Res. Commun. 188, 905-911, 1992

A;Reference number: PQ0438; MUID:93075180; PMID:1445331

A;Accession: PQ0438

A;Molecule type: DNA

A;Residues: 1-82 <DAV>

A;Cross-references: GB:M83558; GB:M83657

R;Johnstone, E.M.; Chaney, M.O.; Norris, F.H.; Pascual, R.; Little, S.P.

Query Match

Best Local Similarity 96.3%; Score 210; DB 2; Length 57;

Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 DAERFRHDSGYEVHQKLVFFAGDVGNSNKGAIIGLMVGCVIA 42

Db 6 DAERFRHDSGYEVHQKLVFFAGDVGNSNKGAIIGLMVGCVIA 47

A;Title: Conservation of the sequence of the Alzheimer's disease amyloid peptide in dog.
 A;Reference number: A60045; MUID:92017079; PMID:1656157

A;Accession: C60045
 A;Molecule type: mRNA
 A;Residues: 12-68 <JOH>

C;Superfamily: Alzheimer's disease amyloid beta protein; animal Kunitz-type proteinase 1

C;Keywords: alternative splicing; Alzheimer's disease; amyloid; Down's syndrome

Query Match Similarity 96.3%; Score 210; DB 2; Length 82;
 Best Local Similarity 97.6%; Pred. No. 3.9e-20;
 Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

RESULT 9
 A49795
 Alzheimer's disease amyloid beta protein precursor - crab-eating macaque

C;Species: Macaca fascicularis (crab-eating macaque)
 C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999

A;Accession: A49795
 R;Podlinsky, M.B.; Tolan, D.R.; Selkoe, D.J.
 Am. J. Pathol. 138: 1423-1435, 1991

A;Title: Homology of the amyloid beta protein precursor in monkey and human supports a

A;Reference number: A49795; MUID:91273117; PMID:1905108

A;Accession: A49795
 A;Status: preliminary

A;Molecule type: mRNA
 A;Residues: 1-695 <POD>

A;Cross-references: GB:MS8727; NID:9342062; PIDN:AA136829.1; PID:9342063

C;Superfamily: Alzheimer's disease amyloid beta protein; animal Kunitz-type proteinase 1

C;Keywords: alternative splicing

Query Match Similarity 96.3%; Score 210; DB 1; Length 695;
 Best Local Similarity 97.6%; Pred. No. 4e-19;
 Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

RESULT 10
 ORIUA4
 Alzheimer's disease amyloid beta protein precursor [validated] - human

N;Alternate names: Alzheimer's disease amyloid A4 protein; coagulation factor XIIa inhibitor
 N;Contains: amyloid beta protein long plaque form; amyloid beta protein short, vascular
 protein precursor splice form APP(170)

C;Species: Homo sapiens (man)

C;Date: 30-Jun-1987 #sequence revision 28-Jul-1995 #text_change 15-Sep-2000

C;Accession: S02260; S05194; A32260; A35486; I39452; I39451; I39453; I59562; A44

468; A28583; A29302; A60805; JL0038; S06121; A60355; A59011; A38384; S29076; S3

R;Lemaire, H.G.; Salbaum, J.M.; Multhaup, G.; Kang, J.; Bayne, R.M.; Unterbeck, A.; Bey

Nucleic Acids Res. 17: 517-522, 1989

A;Title: The PreA (695) precursor protein of Alzheimer's disease A4 amyloid is encoded by

A;Reference number: S02260; MUID:89128427; PMID:2783775

A;Accession: S05194
 A;Molecule type: DNA
 A;Residues: 1-288, 'V', 365-770 <LEM1>

A;Cross-references: EMBL:X1466; NID:335598; PIDN:CAA31830.1; PMID:9871360

A;Note: alternative splice form APP(695)
 R;Lemaire, H.G.
 Submitted to the EMBL Data Library, November 1988

A;Reference number: S05194
 A;Accession: S05194
 A;Molecule type: DNA
 A;Residues: 1-14, 'VW', 17-288, 'V', 365-770 <LEM2>

A;Cross-references: EMBL:X1466; NID:335598; PIDN:CAA31830.1; PMID:9871360

A;Note: alternative splice form APP(695)
 R;Lau Fauci, G.; Lahiri, D.K.; Salton, S.R.J.; Robakis, N.K.

Biochem. Biophys. Res. Commun. 159, 297-304, 1989
 A;Title: Characterization of the 5'-end region and the first two exons of the beta-prot
 A;Reference number: A32277; MUID:89165870; PMID:258123

A;Accession: A32277
 A;Molecule type: DNA
 A;Residues: 1-75 <LA>

A;Cross-references: GB:M24546; GB:M25457; NID:9341202; PIDN:AA13654.1; PID:9516074

R;Johnstone, B.M.; Chaney, M.O.; Moore, R.E.; Ward, K.E.; Norris, F.H.; Little, S.P.
 Biochem. Biophys. Res. Commun. 163, 1248-1255, 1989

A;Title: Alzheimer's disease amyloid peptide is encoded by two exons and shows similarity

A;Reference number: A33260; MUID:8939203; PMID:2675837

A;Accession: A33260
 A;Molecule type: DNA
 A;Residues: 656-737 <JCH>

A;Cross-references: GB:M29270; NID:9178863; PIDN:AA151768.1; PID:9178865

R;Prelli, F.; Levy, E.; van Duinen, S.G.; Bots, G.T.A.M.; Luyendijk, W.; Frangione, B.
 Biochem. Biophys. Res. Commun. 170, 301-307, 1990

A;Title: Expression of a normal and variant Alzheimer's beta-protein gene in amyloid of

A;Reference number: A35486; MUID:90321244; PMID:2198878

A;Accession: A35486
 A;Molecule type: DNA
 A;Residues: 672-710 <PPB1>

A;Note: 693-Gln was found in DNA isolated from HCHWA-D patients

R;Yoshikai, S.I.; Sakai, H.; Dob-ura, K.; Furuya, H.; Sakaki, Y.
 Gene 87, 257-263, 1990

A;Title: Genomic organization of the human amyloid beta-protein precursor gene.

A;Reference number: I39451; MUID:90236318; PMID:211015

A;Accession: I39452
 A;Status: nucleic acid sequence not shown; translation not shown; translated from GB/EM

A;Molecule type: DNA
 A;Residues: 1-770 <YOS1>

A;Cross-references: GB:M33112; NID:9178613; PIDN:AA859502.1; PID:9178616

A;Status: nucleic acid sequence not shown; translation not shown; translated from GB/EM

A;Accession: I39451
 A;Molecule type: DNA
 A;Residues: 1-530 'QWMPVPIPEWAEKGR' <YOS2>

A;Cross-references: GB:M34875; NID:9178608; PIDN:AA859501.1; PID:9178615

R;Yoshikai, S.I.; Sasaki, H.; Dob-ura, K.; Furuya, H.; Sakaki, Y.
 Gene 102, 291-292, 1991

A;Reference number: A50020; MUID:91340168; PMID:1908403

A;Contents: annotation; erratum

A;Note: revised physical map for reference I39451

R;Iiev, E.; Carman, M.D.; Fernandez-Madrid, I.J.; Power, M.D.; Lieberburg, I.; van Duinen, G.;

Science 248, 1124-1126, 1990

A;Title: Mutation of the Alzheimer's disease amyloid gene in hereditary cerebral hemorrhage with secondary amyloidosis

A;Reference number: I39453; MUID:90260663; PMID:2111584

A;Accession: I39453
 A;Status: translated from GB/EMBL/DBJ

A;Molecule type: DNA
 A;Residues: 656-737 <LUV>

A;Cross-references: GB:M37996; NID:9178618; PIDN:AA51727.1; PID:9178620

A;Note: a mutation with 693-Gln is present

R;Murrell, J.; Farlow, M.; Ghetti, B.; Benson, M.D.
 Science 254, 97-99, 1991

A;Title: A mutation in the amyloid precursor protein associated with hereditary Alzheimer's disease

A;Reference number: I39562; MUID:92022553; PMID:1925564

A;Accession: I39562
 A;Status: translated from GB/EMBL/DBJ

A;Molecule type: DNA
 A;Residues: 689-716 'F', 718-737 <MUR>

A;Cross-references: GB:S5765; NID:9336720; PIDN:AB19991.1; PID:9336721

R;Kamino, K.; Orr, H.T.; Pavlani, H.; Wijshut, E.M.; Alonso, M.B.; Puls, S.M.; Anderson, S.E.; Korenberg, J.R.; Sharma, V.; Kukull, W.; Larson, E.; Heston, L.L.; Martin, R.; Lau Fauci, G.; Lahiri, D.K.; Salton, S.R.J.; Robakis, N.K.

A;Experimental source: familial Alzheimer disease family SB

A;Note: sequence extracted from NCBI backbone (NCBIP:115374)

A;Accession: B44017

A;Molecule type: DNA
 A;Residues: 687-718 <KAN>
 A;Cross-references: EMBL:Y0024; NID:9253136; PIDN:AA023646.1; PID:9257380
 A;Experimental source: familial Alzheimer disease family LIT
 A;Note: this sequence has a silent mutation
 R;Kang, J.; Lemaire, H.G.; Unterbeck, A.; Salbaum, J.M.; Masters, C.L.; Grzeschik, K.H.;
 Nature 325, 733-736, 1987
 A;Title: The precursor of Alzheimer's disease amyloid A4 protein resembles a cell-surface
 A;Reference number: A03134; MUID:87144572; PMID:2881207
 A;Accession: A03134
 A;Molecule type: mRNA
 A;Residues: 1-288, 'V', 365-770 <KAN>
 A;Cross-references: GB:Y0024; NID:928525; PIDN:CAA68374.1; PID:928526
 A;Note: alternative splice form APP(595)
 R;Rabois, N.K.; Ramakrishna, N.; Wolfe, G.; Wisniewski, H.M.
 Proc. Natl. Acad. Sci. U.S.A. 84, 4190-4194, 1987
 A;Title: Molecular cloning and characterization of a cDNA encoding the cerebrovascular a
 A;Reference number: A23030; MUID:87231971; PMID:3035574
 A;Accession: A23030
 A;Molecule type: mRNA
 A;Residues: 284-288, 'V', 365-646, 'B', 648-770 <ROB>
 A;Cross-references: GB:NI6705; NID:918539; PIDN:AA51722.1; PID:9178540
 A;Note: the authors translated the codon GAG for residue 647 as ABP
 R;Goldgaber, D.; Lerman, M.I.; McBride, O.W.; Saffiotti, U.; Gajdusek, D.C.
 Science 235, 877-880, 1987
 A;Title: Characterization and chromosomal localization of a cDNA encoding brain amyloid
 A;Reference number: A47584; MUID:87120328; PMID:3810169
 A;Accession: A47584
 A;Molecule type: mRNA
 A;Residues: 674-756, 'S', 758-770 <GOL>
 A;Cross-references: GB:NI6533; NID:9178706; PIDN:AA35540.1; PID:9178707
 A;Experimental source: brain
 R;Tanzi, R.E.; Guella, J.P.; Watkins, P.C.; Bruns, G.A.P.; St George-Hyslop, P.; Van Ke
 Science 235, 880-884, 1987
 A;Title: Amyloid beta protein gene: cDNA, mRNA distribution, and genetic linkage near th
 A;Reference number: A47585; MUID:87120329; PMID:2949367
 A;Accession: A47585
 A;Molecule type: mRNA
 A;Residues: 674-703 <TAN1>
 A;Cross-references: GB:NI15532; NID:9177957; PIDN:AA51564.1; PID:9177958
 R;Dyke, T.; Weidemann, A.; Multiaup, G.; Salbaum, J.M.; Lemaire, H.G.; Muelle
 EMBO J. 7, 949-957, 1988
 A;Title: Identification, transmembrane orientation and biogenesis of the amyloid A4 pre
 A;Reference number: S02638; MUID:88296437; PMID:2900137
 A;Accession: S02638
 A;Molecule type: mRNA
 A;Residues: 672-678 <DVR>
 R;Tanzi, R.E.; McClatchey, A.I.; Lamperti, E.D.; Villa-Komaroff, L.; Guella, J.F.; Neve
 Nature 331, 528-530, 1988
 A;Title: Protease inhibitor domain encoded by an amyloid protein precursor mRNA associat
 A;Reference number: S00707; MUID:88122640; PMID:2893290
 A;Accession: S00707
 A;Molecule type: mRNA
 A;Residues: 286-344, 'I', 365-366 <TAN2>
 A;Cross-references: EMBL:Y0024; NID:928817; PIDN:CAA30042.1; PID:929612
 A;Experimental source: promyelocytic leukemia cell line HL60
 A;Note: alternative splice form APP(551)
 R;Ponte, P.; Gonzalez-Deshott, P.; Schilling, J.; Miller, J.; Hsu, D.; Greenberg, B.; Da
 Nature 331, 525-527, 1988
 A;Title: A new A4 amyloid mRNA contains a domain homologous to serine proteinase inhibit
 A;Reference number: S00925; MUID:88122639; PMID:2893289
 A;Molecule type: mRNA
 A;Cross-references: 1-344, 'I', 365-770 <P02>
 A;Cross-references: GB:Y06939; EMBL:Y00297; NID:928720; PIDN:CAA30050.1; PID:928721
 A;Accession: S00925
 A;Note: alternative splice form APP(751)
 R;Kitaguchi, N.; Takahashi, Y.; Tokushima, Y.; Shiojiri, S.; Ito, H.
 Nature 331, 530-532, 1988
 A;Title: Novel precursor of Alzheimer's disease amyloid protein shows protease inhibitor
 A;Reference number: A36949; MUID:88122641; PMID:2893291
 A;Accession: A36949
 A;Molecule type: mRNA

A;Residues: 287-367 <KIT>
 A;Cross-references: GB:X06981; NID:928816; PIDN:CAA30041.1; PID:929611
 A;Experimental source: glioblastoma cell line
 A;Note: alternative splice form APP(770)
 R;Vitek, M.P.; Raboil, C.G.; de Sauvage, F.; Vitek, S.M.; Bartus, R.T.; Beer, B.; Ashton
 Brain Res. Mol. Brain Res. 4, 121-131, 1988
 A;Title: Absence of mutation in the beta-amyloid cDNAs cloned from the brains of three
 A;Reference number: A30320
 A;Status: not compared with conceptual translation
 A;Accession: A30320
 A;Molecule type: mRNA
 A;Residues: 284-388, 'V', 365-770 <VIT2>
 A;Accession: C30320
 A;Status: not compared with conceptual translation
 A;Molecule type: mRNA
 A;Accession: B30320
 A;Status: not compared with conceptual translation
 A;Molecule type: mRNA
 A;Residues: 122-288, 'V', 365-770 <VIT2>
 A;Accession: A30320
 A;Status: not compared with conceptual translation
 A;Molecule type: mRNA
 A;Accession: A31087
 A;Molecule type: mRNA
 A;Accession: A31087
 A;Residues: 606-770 <VIT3>
 A;Cross-references: GB:NI6705; NID:9178706; PIDN:AA35540.1; PID:9178707
 R;Zain, S.B.; Salim, M.; Chou, W.G.; Sajdel-Sulkowska, E.M.; Majocha, R.E.; Marotta, C.;
 Proc. Natl. Acad. Sci. U.S.A. 85, 929-933, 1988
 A;Title: Molecular cloning of amyloid cDNA derived from mRNA of the Alzheimer disease b,
 A;Reference number: A31087; MUID:88124954; PMID:2813379
 A;Accession: A31087
 A;Molecule type: mRNA
 A;Accession: A31087
 A;Residues: 606-770 <VIT3>
 A;Cross-references: GB:NI6705; NID:9178706; PIDN:AA35540.1; PID:9178707
 A;Note: the authors translated the codon GAA for residue 599 as Asn, AAC for residue 610 as Gly, ACC for residue 610 as Gly, and GCT for residue 610 as Gly
 R;Masters, C.L.; Multiaup, G.; Simms, G.; Pottgiesser, J.; Martins, R.N.; Beyreuther, K.
 Query Match 96.3%; Score 210; DB 1; Length 770;
 Best Local Similarity 97.6%; Prod. No. 4.5e-19; Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 Db QY 1 DAERFRHDSGYEVHQKLVFFAGDVGSNKGAIQLGMVGGVIA 42
 DAERFRHDSGYEVHQKLVFFAGDVGSNKGAIQLGMVGGVIA 713
 RESULT 11
 A27485
 Alzheimer's disease amyloid beta/A4 protein homolog precursor - mouse
 N/Alternate names: proteinase nexin II
 C/Species: Mus musculus (house mouse)
 C/Date: 31-Mar-1989 #sequence revision 31-Mar-1989 #text_change 09-Jul-2004
 C/Accession: A27485; S19727; T19485
 R;Amada, T.; Sasaki, H.; Furuya, H.; Mitata, T.; Goto, I.; Sasaki, Y.
 Biochem. Biophys. Res. Commun. 149, 665-671, 1987
 A;Title: Complementary DNA for the mouse homolog of the human amyloid beta protein prec
 A;Reference number: A27485; MUID:88106489; PMID:332280
 A;Accession: A27485
 A;Molecule type: mRNA
 A;Residues: 1-695 <RAM>
 A;Cross-references: UNIPROT:P12023; GB:MI8373; NID:9191568; PIDN:AAA37139.1; PID:930908
 A;Experimental source: brain
 R;de Strooper, B.; van Leuven, F.; van den Berghe, H.
 Biochem. Biophys. Acta 1129, 141-143, 1991
 A;Title: The amyloid beta protein precursor or proteinase nexin II from mouse is closer
 A;Reference number: S19727; MUID:92096458; PMID:1756177
 A;Accession: S19727
 A;Molecule type: mRNA
 A;Residues: 1-210, 'B', 212-220, 'S', 222-396, 'A', 398-402, 'T', 404-448, 'A', 450-695 <STR>
 A;Cross-references: EMBL:X09379
 R;Izumi, R.; Yamada, T.; Yoshikai, S.; Sasaki, H.; Hattori, M.; Sasaki, Y.
 Gene 112, 186-195, 1992
 A;Title: Positive and negative regulatory elements for the expression of the Alzheimer
 A;Reference number: I49485; MUID:9209998; PMID:1555768
 A;Accession: I49485
 A;Status: translated from GB/EMBL/DDBJ
 A;Molecule type: DNA

A;Residues: 1-19 <RES>
 A;Cross-references: GB:DI0603; NID:g220328; PIDN:BAA01456.1; PID:g220329
 C;Genetics:
 A;Map position: 16G3
 C;Superfamily: Alzheimer's disease amyloid beta protein; animal Kunitz-type proteinase i
 C;Keywords: alternative splicing; amyloid; transmembrane protein

Query Match 87.6%; Score 191; DB 2; Length 695;
 Best Local Similarity 90.5%; Pred. No. 1.1e-16; Matches 38; Conservative 1; Mismatches 3; Indels 0; Gaps 0; Gaps 0;

Qy 1 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMGGVIA 42
 Db 597 DAEFGHDSGPVHQKLVFFAEDGVGSNKGAIIGLMGGVIA 638

RESULT 12

Alzheimer's disease amyloid beta protein precursor - rat
 S00550
 N;Alternate names: beta-A4 amyloid protein
 C;Species: Rattus norvegicus (Norway rat)
 C;Date: 30-Jun-1989 #sequence_revision 30-Jun-1989 #text_change 09-Jul-2004
 C;Accession: S00550; A41245; A39820; S46251
 A;Molecule type: mRNA
 R;Silvers, B. D.; Hlibic, C.; Multhaup, G.; Salbaum, M.; Beyreuther, K.; Seuburg, P.H.
 EMBO J. 7, 1355-1370, 1988
 A;Title: Alzheimer's disease amyloidogenic glycoprotein: expression pattern in rat brain
 R;Schubert, D.; Schroeder, R.; Lacorbiere, M.; Saitoh, T.; Cole, G.
 Science 241, 223-226, 1988
 A;Title: Amyloid beta protein Precursor is possibly a heparan sulfate proteoglycan core
 A;Reference number: A41245; MUID:88264430; PMID:296852
 A;Accession: A41245
 A;Molecule type: protein
 A;Residues: 18-37, 'X', 39-40, 'X', 42-44 <SCH>
 A;Note: evidence for heparan sulfate attachment
 R;Hesse, L.; Beher, D.; Masters, C.L.; Multhaup, G.
 FEBS Lett. 349, 105-116, 1994
 A;Title: The beta-A4 amyloid precursor protein binding to copper.
 A;Reference number: S46351; MUID:94320627; PMID:7913895
 A;Contents: annotation; copper binding sites
 A;Note: rat peptides were isolated but not sequenced
 R;Potempka, A.; Styles, J.; Menta, P.; Kim, K.S.; Miller, D.L.
 J. Biol. Chem. 266, 8465-8469, 1991
 A;Title: Purification and tissue level of the beta-amyloid peptide precursor of rat brain
 A;Reference number: A39820; MUID:91217087; PMID:1673681
 A;Accession: A39820
 A;Status: preliminary
 A;Molecule type: protein
 A;Residues: 18-32 <POT>
 A;Experimental source: brain
 C;Comment: Deposition of amyloid protein as neurofibrillary tangles and/or plaques is ch
 C;Superfamily: Alzheimer's disease amyloid beta protein; animal Kunitz-type proteinase i
 C;Keywords: alternative splicing; amyloid; glycoprotein; transmembrane protein
 F;625-648/Domain: transmembrane #status predicted <TMS>

Query Match 87.6%; Score 191; DB 2; Length 695;
 Best Local Similarity 90.5%; Pred. No. 1.1e-16; Matches 38; Conservative 1; Mismatches 3; Indels 0; Gaps 0; Gaps 0;

Qy 1 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMGGVIA 42
 Db 597 DAEFGHDSGPVHQKLVFFAEDGVGSNKGAIIGLMGGVIA 638

RESULT 13

JH0773
 Alzheimer's disease amyloid beta protein precursor - African clawed frog
 C;Species: Xenopus laevis (African clawed frog)
 C;Date: 10-Jun-1993 #sequence_revision 10-Jun-1993 #text_change 13-Aug-1999

Query Match 26.8%; Score 58.5; DB 2; Length 165;
 Best Local Similarity 33.3%; Pred. No. 3; Matches 12; Conservative 8; Mismatches 15; Indels 1; Gaps 1;

Qy 6 HDSCGYEVHQLVFFAGDVGSNKGAIIGLMGGVIA 41
 Db

C;Accession: JH0773
 R;Okado, H.; Okamoto, H.
 Biochem. Biophys. Res. Commun. 189, 1561-1568, 1992
 A;Title: A Xenopus homologue of the human beta-amyloid precursor protein: developmental
 A;Reference number: JH0773; MUID:9129227; PMID:128205
 A;Accession: JH0773
 A;Molecule type: mRNA
 A;Residues: 1-747 <OKA>
 A;Cross-references: GB:SS2417; NID:g263150; PIDN:AAB24853.1; PID:g263151
 A;Experimental source: larva
 C;Superfamily: Alzheimer's disease amyloid beta protein; animal Kunitz-type proteinase i
 C;Keywords: alternative splicing; amyloid
 F;287-337/Domain: animal Kunitz-type proteinase inhibitor homology <BP1>
 Query Match 87.6%; Score 191; DB 2; Length 747;
 Best Local Similarity 85.7%; Pred. No. 1.2e-16; Matches 36; Conservative 4; Mismatches 2; Indels 0; Gaps 0; Gaps 0;

Qy 1 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMGGVIA 42
 Db 649 DSEBIRKHDAYEVHQLVFFAEDGVGSNKGAIIGLMGGVIA 690

RESULT 14

S23094
 beta-amyloid protein precursor - rat
 C;Species: Rattus norvegicus (Norway rat)
 C;Date: 22-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 03-May-1996
 C;Accession: S23094
 R;Kojima, S.; Omori, M.
 FEBS Lett. 304, 57-60, 1992
 A;Title: Two-way cleavage of beta-amyloid protein precursor by multicatalytic proteinase
 A;Reference number: S23094; MUID:92316198; PMID:1618299
 A;Accession: S23094
 A;Molecule type: protein
 A;Residues: 1-33 <Q0>
 C;Superfamily: Alzheimer's disease amyloid beta protein; animal Kunitz-type proteinase i
 Query Match 57.8%; Score 126; DB 2; Length 33;
 Best Local Similarity 85.7%; Pred. No. 1e-09; Matches 24; Conservative 1; Mismatches 3; Indels 0; Gaps 0; Gaps 0;

Qy 1 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMGGVIA 28
 Db 6 DAEFGHDSGPVHQKLVFFAEDGVGSNKGAIIGLMGGVIA 33

RESULT 15

H90519
 ABC transporter atp-binding protein [imported] - Mycoplasma pulmonis (strain UAB CTP)
 C;Species: Mycoplasma pulmonis
 C;Date: 24-May-2001 #sequence_revision 24-May-2001 #text_change 09-Jul-2004
 C;Accession: H90519
 R;Chambard, J.; Hailig, R.; Parris, S.; Barbe, V.; Samson, D.; Galisson, F.; Moszer, I.
 Nucleic Acids Res. 29, 2145-2153, 2001
 A;Title: The complete genome sequence of the murine respiratory pathogen Mycoplasma pul
 A;Reference number: A99512; MUID:21267165; PMID:11333084
 A;Accession: H90519
 A;Status: preliminary
 A;Molecule type: DNA
 A;Residues: 1-165 <KUR>
 A;Cross-references: UNIPROT:Q98RE5; GB:AL445566; PIDN:914089477; PIDN:CAIC13237.1; GSPDB:
 A;Experimental source: strain UAB CTP
 C;Genetics:
 A;Gene: MPPU 0640
 A;Genetic code: SGC3

Query Match 26.8%; Score 58.5; DB 2; Length 165;
 Best Local Similarity 33.3%; Pred. No. 3; Matches 12; Conservative 8; Mismatches 15; Indels 1; Gaps 1;

Qy 6 HDSCGYEVHQLVFFAGDVGSNKGAIIGLMGGVIA 41
 Db

Mon Nov 22 09:27:31 2004

usb-09-899-815-1_1.rpr

Db 18 NDFNLELDNSKLIPITGPSSGKTTLN-MIGNIVL 52

Search completed: November 19, 2004, 15:55:22
Job time : 40 secs

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GenCore version 5.1.6

OM protein - protein search, using SW model

Run on: November 19, 2004, 15:45:09 ; Search time 193 Seconds

(without alignments)

125.211 Million cell updates/sec

Title: US-09-899-815-1

Perfect score: 218

Sequence: 1 DAEFRHDSGYEVHQLVFF DVGSNKGAIIGLMVGCVVIA 42

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched:

1825181 seqs, 573374646 residues

Total number of hits satisfying chosen parameters: 1825181

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Listing first 45 summaries

Database : UniProt 02;*

1: uniprot_sprot;*

2: uniprot_trembl;*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match Length	DB ID	Description	
1	210	96.3	42	Q7M088	
2	210	96.3	57	1 A4_URSMA	
3	210	96.3	58	1 A4_CANFA	
4	210	96.3	58	1 A4_RABIT	
5	210	96.3	58	1 A4_SHEP	
6	210	96.3	59	1 A4_BOVIN	
7	210	96.3	113	2 Q8JH58	
8	210	96.3	534	2 Q93296	
9	210	96.3	534	2 Q93296	
10	210	96.3	695	2 Q6RH29	
11	210	96.3	695	2 Q9DG58	
12	210	96.3	695	2 AAR9727	
13	210	96.3	751	1 A4_SAISC	
14	210	96.3	751	2 Q6RH28	
15	210	96.3	751	2 Q9DG57	
16	210	96.3	751	2 AAR9728	
17	210	96.3	751	2 AAH5529	
18	210	96.3	770	1 A4_CAVPO	
19	210	96.3	770	1 A4_HUMAN	
20	210	96.3	770	1 A4_MACFA	
21	96.3	770	1 A4_PIG	Query Match	
22	210	96.3	770	2 Q6RH30	Best Local Similarity 96.3%; Score 210; DB 2; Length 42; Matches 41; Conservative 0; Misnatches 1; Indels 0; Gaps 0;
23	210	96.3	770	2 AAR9726	
24	192	88.1	695	2 Q7ZK00	
25	192	88.1	695	2 Q989F9	
26	191	87.6	79	2 Q35463	
27	191	87.6	218	2 Q8BPV5	
28	191	87.6	384	2 Q8PC7	
29	191	87.6	693	2 Q98SG0	
30	191	87.6	695	2 AAH70409	
31	191	87.6	733	2 Q6P6Q5	

RESULT 1

SEQUENCE

Medline=93290653; PubMed=7685598;

Shimohigashi Y., Matsumoto H., Takano Y., Saito R., Iwata T.,

Kanai Y., Ohno M.; "Receptor-mediated specific biological activity of a beta-amyloid protein fragment for NK-1 substance P receptors.";

Biochem. Biophys. Res. Commun. 193:624-630(1993).

PIR; PPN0512; PNN0512.

DR; GO:0016021; C:integral to membrane; IBA.

DR; GO:0005488; P:binding; IBA.

DR; InterPro; IPR001255; Beta-APP.

DR; Pfam; PPN3494; Beta-APP.

DR; PRINTS; PR00204; BETAAMYLOID.

FT; NON_TER 1

FT; NON_TER 42 42

SEQUENCE 42 AA: 4514 MW: 3AC85563D785C37 CRC64:

Q8JH58 chelydra se

Q93296 cavia porce

Q93296 ursus marit

Q93280 canis famili

Q93280 canis famili

Q93280 oryctolagus

Q93275 ovis aries

Q93203 bos taurus

Q8JH58 chelydra se

Q93296 gallus gallus

Q93296 gallus gallus

Q6RH29 canis famili

Q6RH29 gallus gallus

Q6RH29 gallus gallus

Q9DG58 canis famili

Q9DG58 canis famili

Q9DG57 canis famili

Q9DG57 canis famili

Q9DG58 canis famili

ALIGNMENTS

32	191	87.6	733	2 AAH2082 rattus no
33	191	87.6	747	2 Q91963 xenopus. ap
34	191	87.6	749	06nrl xenopus lae
35	191	87.6	749	Aah70668 xenopus 1
36	191	87.6	750	06djb6 xenopus tro
37	191	87.6	770	P2023 m amyloid b
38	191	87.6	770	P08592 r amyloid b
39	191	87.6	770	Amn0259 rattus no
40	191	87.6	770	Ab23169 mus muscu
41	185	84.9	699	Q57394 narke japon
42	169	77.5	33	Q9uc33 homo sapien
43	168	77.1	737	Q91279 fugu rubrip
44	168	77.1	1 A4_TETFF	O73683 tetradon f
45	150.5	69.0	357	Q8uui8 brachydanio

CC EMBL; X56129; CAA39594.1; -.

DR HSSP; P0592; INNJ.

DR InterPro; IPR008155; A4_APP.

DR InterPro; IPR001255; Beta-APP.

DR Pfam; PF03494; Beta-APP; 1.

DR Prints; PRO0204; BETAAMYLOID.

DR PROSITE; PS00319; A4_INTRA; PARTIAL.

DR PROSITE; PS00320; A4_INTRA; PARTIAL.

DR KW Amyloid; Glycoprotein; Transmembrane.

FT NON_TER 1 1

FT CHAIN 6 48

FT DOMAIN <1 33

FT TRANSMEM 34 57

FT DOMAIN 58 >58

FT NON_TER 58 58

FT SEQUENCE 58 AA; 6300 MW; F434209D88EBA82D CRC64;

Query Match 96.3%; Score 210; DB 1; Length 58; Best Local Similarity 97.6%; Pred. No. 8.9e-20; Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0; Oligo 1 DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVIA 42

Db 6 DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVIA 47

Query Match 96.3%; Score 210; DB 1; Length 58; Best Local Similarity 97.6%; Pred. No. 8.9e-20; Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0; Oligo 1 DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVIA 42

Db 6 DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVIA 47

RESULT 5

A4_SHEEP STANDARD; PRT; 58 AA.

ID A4_SHEEP STANDARD; PRT; 58 AA.

AC Q28757; (Rel. 35, Created) 01-NOV-1997 (Rel. 35, Last sequence update)

DT 05-JUL-2004 (Rel. 44, Last annotation update)

DR Alzheimer's disease amyloid A4 protein homolog [Contains: Beta-amyloid protein (Beta-APP) (A-beta)] (Fragment).

DE Name=APP; OS Ovis aries (Sheep). Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae; Caprae; Ovis; NCBI_TaxID=9940; OX Bos taurus (Bovine). Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae; OX Bos. NCBI_TaxID=9913;

RN [1] SEQUENCE FROM N.A.

RP TISSUE=Heart; RX MEDLINE=92017079; PubMed=1656157; RA Johnstone B.M., Chaney M.O., Norris F.H., Pascual R., Little S.P.; RT "Conservation of the sequence of the Alzheimer's disease amyloid peptide in dog, polar bear and five other mammals by cross-species RT polymerase chain reaction analysis." Brain Res. Mol. Brain Res. 10:299-305 (1991). RT Brain Res. Mol. Brain Res. 10:299-305 (1991). RT FUNCTION: Functional neuronal receptor which couples to intracellular signaling pathway through the GTP-binding protein G(O) (By similarity). RT -!- SUBCELLULAR LOCATION: Type I membrane protein.

CC -!- SIMILARITY: Belongs to the APP family.

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CC EMBL; X56124; CAA39591.1; -.

DR EMBL; X56126; CAA39591.1; -.

DR HSSP; P08592; INNJ.

DR InterPro; IPR001255; A4_APP.

DR Prints; PRO03494; BETAAMYLOID.

DR PROSITE; PS00319; A4_INTRA; PARTIAL.

DR PROSITE; PS00320; A4_INTRA; PARTIAL.

DR KW Amyloid; Glycoprotein; Transmembrane.

FT NON_TER 1 1

FT CHAIN 7 49

FT DOMAIN <1 34

FT TRANSMEM 35 58

FT DOMAIN 59 >59

FT NON_TER 59 59

FT SEQUENCE 59 AA; 6414 MW; F43469D488A2B12D CRC64;

CC ion reduction. In vitro, copper-metallated APP induces neuronal death directly or is potentiated through Cu(II)-mediated low-density lipoprotein oxidation (By similarity). Can regulate neurite outgrowth through binding to components of the extracellular matrix such as heparin and collagen I and IV (By similarity). The splice isoforms that contain the BPTI domain possess protease inhibitor activity (By similarity).

-!- FUNCTION: Beta-amyloid peptides are lipophilic metal chelators with metal-reducing activity. Bind transient metals such as copper, zinc and iron (By similarity).

-!- FUNCTION: The gamma-CTF peptides as well as the caspase-cleaved peptides, including C31, are potent enhancers of neuronal apoptosis (By similarity).

-!- SUBUNIT: Binds via its C-terminal to the PID domain of several cytoplasmic proteins, including APP family members, the APPA family, MAPK8IP1, and SHC1, Numb and Dab1 (By similarity). Binding to Dab1 inhibits its Serine phosphorylation (By similarity). Also interacts with GPCR-like protein BPP, FPR1L, APPBP1, IB1L, KNS2 (via its TPR domains) (By similarity), APPB2 (via Bass) and DBB1. In vitro, it binds MAPT via the MT-binding domains (By similarity). Associates with microtubules in the presence of ATP and in a kinase-dependent manner (By similarity).

-!- SUBCELLULAR LOCATION: Type I membrane protein. Cell surface protein that rapidly becomes internalized via clathrin-coated pit. During maturation, the immature APP (N-glycosylated in the endoplasmic reticulum) moves to the Golgi complex where complete maturation occurs (O-glycosylated and sulfated). After alpha-secretase cleavage, soluble APP is released into the extracellular space and the C-terminal is internalized to endosomes and lysosomes. Some APP accumulates in secretory transport vesicles leaving the late Golgi compartment and returns to the cell surface. Gamma-CTF(59) peptide is located to both the cytoplasm and nucleus of neurons (By similarity).

-!- ALTERNATIVE PRODUCTS:

Event=Alternative splicing; Named isoforms=2;

Name=APP70;
IsoId=Q95241-1; Sequence=displayed;

Name=APP95;
IsoId=Q95241-2; Sequence=Not described;

-!- DOMAIN: The basolateral sorting signal (BASS) is required for sorting of membrane proteins to the basolateral surface of epithelial cells (By similarity).

-!- DOMAIN: The NPXY sequence motif found in many tyrosine-phosphorylated proteins is required for the specific binding of the PID domain. However additional amino acids either N- or C-terminal to the NPXY motif are often required for complete interaction. The PID domain-containing proteins which bind APP require the YNPTY motif for full interaction. These interactions are independent of phosphorylation on the terminal tyrosine residue. The NPXY site is also involved in clathrin-mediated endocytosis (By similarity).

-!- PTM: Proteolytically processed under normal cellular conditions. Cleavage by alpha-secretase or alternatively by beta-secretase leads to generation and extracellular release of soluble APP peptides, S-APP-alpha and S-APP-beta, respectively, and the retention of corresponding membrane-anchored C-terminal fragments, C83 and C99. Subsequent processing of C83 by gamma-secretase yields P3 peptides. This is the major secretory pathway and is nonamylodogenic. Alternatively, presenilin1/ncatrin-mediated gamma-secretase processing of C99 releases the amyloid beta protein, amyloid-beta 40 (Abeta40), and amyloid-beta 42 (Abeta42), major components of amyloid plaque, and the cytotoxic C-terminal fragments, gamma-CTF(50), gamma-CTF(57) and gamma-CTF(59) (By similarity).

-!- PTM: Proteolytically cleaved by caspases during neuronal apoptosis (By similarity). Cleavage at Asp-720 by either caspase-3, -8 or -9 results in the production of the neurotoxic C31 peptide and the increased production of beta-amyloid peptides (By similarity).

-!- PTM: N- and O-glycosylated (By similarity).

-!- PTM: Phosphorylation in the C-terminal on tyrosine, threonine and serine residues is neuron-specific. Phosphorylation can affect APP processing, neuronal differentiation and interaction with other

CC proteins (By similarity).

CC -!- MISCELLANEOUS: Chelation of metal ions, notably copper, iron and zinc, can induce histidine-bridging between beta-amyloid molecules resulting in beta-amyloid-metal aggregates (By similarity).

CC Extracellular zinc-binding increases binding of heparin to APP and CC inhibits collagen-binding (By similarity).

CC -!- SIMILARITY: Belongs to the APP family.

CC -!- SIMILARITY: Contains 1 BPTI/Kunitz inhibitor domain.

CC This SWISS-PROT entry is copyright. It is produced through a collaboration CC between the Swiss Institute of Bioinformatics and the EMBL outstation - CC the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way CC modified and this statement is not removed. Usage by and for commercial CC entities requires a license agreement (See <http://www.isb-sib.ch/announce/> or send an email to license@isb-sib.ch).

CC -----

DR EMBL; SB1024; ADI4347-1; -.

DR HSSP; P08592; INNMJ.

DR InterPro; IPR0018155; A4_APP.

DR InterPro; IPR0018154; A4_exTRA.

DR InterPro; IPR001255; Beta_APP.

DR InterPro; IPR002223; Prot_Inh_Kunz-m.

DR Pfam; PR02177; A4_EXTRA; 1.

DR Pfam; PR03494; Beta-APP; 1.

DR Pfam; PR00014; Kunitz_BPTI; 1.

DR PRINTS; PR00203; AMYLOIDA4.

DR PRINTS; PR00759; BASICPTASE.

DR PRINTS; PR00041; BETAAMYLOD.

DR PROSITE; PS00222; Kunitz_BPTI.

DR SMART; SM0006; A4_EXTRA; 1.

DR SMART; SM0031; KU; 1.

DR PROSITE; PS00319; A4_EXTRA; 1.

DR PROSITE; PS00320; A4_INTRA; 1.

DR PROSITE; PS00280; BPTI_KUNITZ_1; 1.

DR PROSITE; PS00279; BPTI_KUNITZ_2; 1.

DR Alternative splicing; Amyloid; Apoptosis; Cell adhesion; Coated pits; Copper; Endocytosis; Glycoprotein; Heparin-binding; Iron; Metal-binding; phosphoprotein; Proteoglycan; Serine protease inhibitor; Signal; Transmembrane; Zinc.

FT SIGNAL 1 17 By similarity.

FT CHAIN 18 751 Amyloid beta A4 protein.

FT CHAIN 18 668 Soluble APP-alpha (Potential).

FT CHAIN 18 652 Soluble APP-beta (Potential).

FT CHAIN 653 751 C99 (Potential).

FT CHAIN 653 694 Beta-amyloid protein 42 (Potential).

FT CHAIN 653 692 Beta-amyloid protein 40 (Potential).

FT CHAIN 669 751 C83 (Potential).

FT CHAIN 669 694 P3(42) (Potential).

FT CHAIN 669 692 P3(40) (Potential).

FT CHAIN 693 751 Gamma-CTF(59) (Potential).

FT CHAIN 695 751 Gamma-CTF(57) (Potential).

FT CHAIN 702 751 Gamma-CTF(50) (Potential).

FT CHAIN 721 751 C31 (Potential).

FT DOMAIN 18 680 Extracellular (Potential).

FT DOMAIN 681 704 Potential.

FT DOMAIN 705 751 Cytoplasmic (Potential).

FT DOMAIN 96 110 Heparin-binding (By similarity).

FT DOMAIN 181 188 ZINC-BINDING (By SIMILARITY).

FT DOMAIN 291 341 BPTI/Kunitz inhibitor.

FT DOMAIN 316 344 Heparin-binding (By similarity).

FT DOMAIN 363 428 Heparin-binding (By similarity).

FT DOMAIN 504 521 Collagen-binding (By similarity).

FT DOMAIN 713 732 Interaction with G(o)-alpha (By similarity).

FT DOMAIN 230 260 Asp/Glu-rich (acidic).

FT DOMAIN 274 280 Poly-Thr.

FT SITE 144 144 Required for copper(II) reduction (By similarity).

FT SITE 301 302 Reactive bond.

FT SITE 652 653 Cleavage (by beta-secretase) (By similarity).

FT SITE 653 654 Cleavage (by caspase-6) (By similarity).

FT	SITE	668	669	RESULT 15
FT	SITE	685	685	PRELIMINARY; PRT; 751 AA.
FT	SITE	687	687	09DGJ7 ID 09DGJ7
FT	SITE	692	693	09DGJ7; DT DT 01-MAR-2001 (TREMBlrel. 16, Created)
FT	SITE	694	695	01-MAR-2004 (TREMBlrel. 25, Last annotation update)
FT	SITE	701	702	DE Beta-amyloid protein 751 isoform.
FT	SITE	705	715	OS Gallus gallus (Chicken).
FT	SITE	720	721	OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae.
FT	SITE	738	741	OC Gallus.
RESULT 14				OX NCBI_TAXID=9031;
O6RH28	QERH28	PRELIMINARY;	PRT; 751 AA.	RN RN [1]
AC	QERH28;			RA Sarasa M., Rodolosse A., Sorribas V;
DT	05-JUL-2004 (TREMBlrel. 27, Last sequence update)			RL Submitted (JUL-2000) to the EMBL/Genbank/DDBJ databases.
DT	05-JUL-2004 (TREMBlrel. 27, Last annotation update)			CC -1- SIMILARITY: Contains 1 BPTI/Kunitz inhibitor domain.
DE	Beta amyloid protein isoform APP551.			DR EMBL; AF282219; AAG0594.1; -.
GN	Name-beta APP; OS Canis familiaris (Dog).			DR HSSP; P08592; INNJ.
OC	Eukaryota; Chordata; Craniata; Vertebrata; Euteleostomi;			DR GO; GO:0016021; C:integral to membrane; IEA.
OC	Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.			DR GO; GO:005488; F:serine-type endopeptidase inhibitor activity; IEA.
OX	NCBI_TAXID=9615;			DR InterPro; IPR008154; A4_extra.
RN	[1]			DR InterPro; IPR001255; Beta APP.
RR	SEQUENCE FROM N.A.			DR InterPro; IPR002223; Prot_Inh_Kunz-m.
RA	Nakata M.;			DR InterPro; IPR02177; A4_EKTRA; I.
RL	Submitted (DBC-2003) to the EMBL/GenBank/DDBJ databases.			DR Pfam; PF00014; Beta-APP; I.
CC	-1- SIMILARITY: Contains 1 BPTI/Kunitz inhibitor domain.			DR Pfam; PF00014; Kunitz_BPTI; I.
DR	EMBL; AY498708; AAR97728.1; -.			DR PRINTS; PR00203; AMYLOID4.
DR	InterPro; IPR008155; A4_APP.			DR PRINTS; PR00759; BASICPTASE.
DR	InterPro; IPR008154; A4_extra.			DR PRINTS; PR00204; BETAMYLOID.
DR	InterPro; IPR001255; Beta-APP.			DR PRODOM; PR002222; Prot_Inh_Kunz-m; I.
DR	InterPro; IPR002223; Prot_Inh_Kunz-m.			DR SMART; SM0006; A4_EXTRa; I.
DR	Pfam; PF02177; A4_EXTRA; I.			DR SMART; SM00131; KU; I.
DR	Pfam; PF003494; Beta-APP; I.			DR PROSITE; PS00319; A4_EXTRA; I.
DR	Pfam; PF00014; Kunitz_BPTI; I.			DR PROSITE; PS00320; A4_INTRa; I.
DR	PRINTS; PR00203; AMYLOID4.			DR PROSITE; PS00280; BPTI_KUNITZ; I.
DR	PRINTS; PR00759; BASICPTASE.			DR PROSITE; PS050279; BPTI_KUNITZ_2; I.
DR	PRODOM; PR002222; Prot_Inh_Kunz-m; I.			SQ SEQUENCE 751 AA; 84705 MW; E78E413A8033D84 CRC64;
DR	SMART; SM0006; A4_EXTRA; I.			Query Match 96.3%; Score 210; DB 2; Length 751;
DR	PROSITE; PS00319; A4_EXTRA; I.			Best Local Similarity 97.6%; Pred. No. 1.1e-18; Indels 0; Gaps 0;
DR	PROSITE; PS00320; BPTI_KUNITZ; I.			Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
DR	PROSITE; PS00280; BPTI_KUNITZ_2; I.			
DR	SEQUENCE 751 AA; 84705 MW; E78E413A8033D84 CRC64;			
Query Match 95.3%; Score 210; DB 2; Length 751;				
Best Local Similarity 97.6%; Pred. No. 1.1e-18; Indels 0; Gaps 0;				
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;				
1 DAERFRHDSGYEVHQKLVFFAGDVGSNKGAIIGLMGGVIA 42				
653 DABFRHDSGYEVHQKLVFFAGDVGSNKGAIIGLMGGVIA 694				

Db 1 DAEFRHDSGYEVHQKLVFFAGDVGSNKGAIIGLMVGVVIA 42

RESULT 2
US-09-14659-1

SEQUENCE 1, Application PC/TUSS5514659

GENERAL INFORMATION:

APPLICANT: Seubert, Peter A.

APPLICANT: Vigo-Pelfrey, Carmen

APPLICANT: Schenk, Dale B.

APPLICANT: Barbour, Robin

TITLE OF INVENTION: Methods for Aiding in the Diagnosis of

Alzheimer's Disease by Measuring Amyloid-Beta Peptide

TITLE OF INVENTION: (X-41) And Tau

NUMBER OF SEQUENCES: 2

CORRESPONDENCE ADDRESS:

STREET: One Market Plaza, Steuart Tower, Suite 2000

CITY: San Francisco

STATE: California

COUNTRY: USA

ZIP: 94105

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US95/14659

FILING DATE: April 7, 1995

CLASSIFICATION:

ATTORNEY/AGENT INFORMATION:

NAME: Heslin, James M.

REGISTRATION NUMBER: 29,541

REFERENCE/DOCKET NUMBER: 15270-002110

TELECOMMUNICATION INFORMATION:

TELEPHONE: 415-326-2400

TELEFAX: 415-226-2422

INFORMATION FOR SEQ ID NO: 1:

SEQUENCE CHARACTERISTICS:

SEQUENCE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US95/14659

FILING DATE: April 7, 1995

CLASSIFICATION:

ATTORNEY/AGENT INFORMATION:

NAME: Musting, Ann M.

REGISTRATION NUMBER: 33,977

REFERENCE/DOCKET NUMBER: 600-226-US-01

TELECOMMUNICATION INFORMATION:

TELEPHONE: 612-339-3031

TELEFAX: 612-339-3061

INFORMATION FOR SEQ ID NO: 2:

SEQUENCE CHARACTERISTICS:

SEQUENCE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US95/14659

FILING DATE: April 7, 1995

CLASSIFICATION:

ATTORNEY/AGENT INFORMATION:

NAME: Musting, Ann M.

REGISTRATION NUMBER: 33,977

REFERENCE/DOCKET NUMBER: 600-226-US-01

TELECOMMUNICATION INFORMATION:

TELEPHONE: 612-339-3031

TELEFAX: 612-339-3061

INFORMATION FOR SEQ ID NO: 3:

SEQUENCE CHARACTERISTICS:

SEQUENCE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US95/14659

FILING DATE: April 7, 1995

CLASSIFICATION:

ATTORNEY/AGENT INFORMATION:

NAME: Musting, Ann M.

REGISTRATION NUMBER: 33,977

REFERENCE/DOCKET NUMBER: 600-226-US-01

TELECOMMUNICATION INFORMATION:

TELEPHONE: 612-339-3031

TELEFAX: 612-339-3061

INFORMATION FOR SEQ ID NO: 4:

SEQUENCE CHARACTERISTICS:

SEQUENCE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US95/14659

FILING DATE: April 7, 1995

CLASSIFICATION:

ATTORNEY/AGENT INFORMATION:

NAME: Musting, Ann M.

REGISTRATION NUMBER: 33,977

REFERENCE/DOCKET NUMBER: 600-226-US-01

TELECOMMUNICATION INFORMATION:

TELEPHONE: 612-339-3031

TELEFAX: 612-339-3061

INFORMATION FOR SEQ ID NO: 5:

SEQUENCE CHARACTERISTICS:

SEQUENCE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US95/14659

FILING DATE: April 7, 1995

CLASSIFICATION:

ATTORNEY/AGENT INFORMATION:

NAME: Musting, Ann M.

REGISTRATION NUMBER: 33,977

REFERENCE/DOCKET NUMBER: 600-226-US-01

TELECOMMUNICATION INFORMATION:

TELEPHONE: 612-339-3031

TELEFAX: 612-339-3061

INFORMATION FOR SEQ ID NO: 6:

SEQUENCE CHARACTERISTICS:

SEQUENCE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US95/14659

FILING DATE: April 7, 1995

CLASSIFICATION:

ATTORNEY/AGENT INFORMATION:

NAME: Musting, Ann M.

REGISTRATION NUMBER: 33,977

REFERENCE/DOCKET NUMBER: 600-226-US-01

TELECOMMUNICATION INFORMATION:

TELEPHONE: 612-339-3031

TELEFAX: 612-339-3061

INFORMATION FOR SEQ ID NO: 7:

SEQUENCE CHARACTERISTICS:

SEQUENCE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US95/14659

FILING DATE: April 7, 1995

CLASSIFICATION:

ATTORNEY/AGENT INFORMATION:

NAME: Musting, Ann M.

REGISTRATION NUMBER: 33,977

REFERENCE/DOCKET NUMBER: 600-226-US-01

TELECOMMUNICATION INFORMATION:

TELEPHONE: 612-339-3031

TELEFAX: 612-339-3061

INFORMATION FOR SEQ ID NO: 8:

SEQUENCE CHARACTERISTICS:

SEQUENCE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US95/14659

FILING DATE: April 7, 1995

CLASSIFICATION:

ATTORNEY/AGENT INFORMATION:

NAME: Musting, Ann M.

REGISTRATION NUMBER: 33,977

REFERENCE/DOCKET NUMBER: 600-226-US-01

TELECOMMUNICATION INFORMATION:

TELEPHONE: 612-339-3031

TELEFAX: 612-339-3061

INFORMATION FOR SEQ ID NO: 9:

SEQUENCE CHARACTERISTICS:

SEQUENCE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US95/14659

FILING DATE: April 7, 1995

CLASSIFICATION:

ATTORNEY/AGENT INFORMATION:

NAME: Musting, Ann M.

REGISTRATION NUMBER: 33,977

REFERENCE/DOCKET NUMBER: 600-226-US-01

TELECOMMUNICATION INFORMATION:

TELEPHONE: 612-339-3031

TELEFAX: 612-339-3061

INFORMATION FOR SEQ ID NO: 10:

SEQUENCE CHARACTERISTICS:

SEQUENCE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US95/14659

FILING DATE: April 7, 1995

CLASSIFICATION:

ATTORNEY/AGENT INFORMATION:

NAME: Musting, Ann M.

REGISTRATION NUMBER: 33,977

REFERENCE/DOCKET NUMBER: 600-226-US-01

TELECOMMUNICATION INFORMATION:

TELEPHONE: 612-339-3031

TELEFAX: 612-339-3061

INFORMATION FOR SEQ ID NO: 11:

SEQUENCE CHARACTERISTICS:

SEQUENCE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US95/14659

FILING DATE: April 7, 1995

CLASSIFICATION:

ATTORNEY/AGENT INFORMATION:

NAME: Musting, Ann M.

REGISTRATION NUMBER: 33,977

REFERENCE/DOCKET NUMBER: 600-226-US-01

TELECOMMUNICATION INFORMATION:

TELEPHONE: 612-339-3031

TELEFAX: 612-339-3061

INFORMATION FOR SEQ ID NO: 12:

SEQUENCE CHARACTERISTICS:

SEQUENCE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US95/14659

FILING DATE: April 7, 1995

CLASSIFICATION:

ATTORNEY/AGENT INFORMATION:

NAME: Musting, Ann M.

REGISTRATION NUMBER: 33,977

REFERENCE/DOCKET NUMBER: 600-226-US-01

TELECOMMUNICATION INFORMATION:

TELEPHONE: 612-339-3031

TELEFAX: 612-339-3061

INFORMATION FOR SEQ ID NO: 13:

SEQUENCE CHARACTERISTICS:

SEQUENCE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US95/14659

FILING DATE: April 7, 1995

CLASSIFICATION:

ATTORNEY/AGENT INFORMATION:

NAME: Musting, Ann M.

REGISTRATION NUMBER: 33,977

REFERENCE/DOCKET NUMBER: 600-226-US-01

TELECOMMUNICATION INFORMATION:

TELEPHONE: 612-339-3031

TELEFAX: 612-339-3061

INFORMATION FOR SEQ ID NO: 14:

SEQUENCE CHARACTERISTICS:

SEQUENCE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US95/14659

FILING DATE: April 7, 1995

CLASSIFICATION:

ATTORNEY/AGENT INFORMATION:

NAME: Musting, Ann M.

REGISTRATION NUMBER: 33,977

REFERENCE/DOCKET NUMBER: 600-226-US-01

TELECOMMUNICATION INFORMATION:

TELEPHONE: 612-339-3031

TELEFAX: 612-339-3061

INFORMATION FOR SEQ ID NO: 15:

SEQUENCE CHARACTERISTICS:

SEQUENCE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US95/14659

FILING DATE: April 7, 1995

CLASSIFICATION:

ATTORNEY/AGENT INFORMATION:

NAME: Musting, Ann M.

REGISTRATION NUMBER: 33,977

REFERENCE/DOCKET NUMBER: 600-226-US-01

TELECOMMUNICATION INFORMATION:

TELEPHONE: 612-339-3031

TELEFAX: 612-339-3061

INFORMATION FOR SEQ ID NO: 16:

SEQUENCE CHARACTERISTICS:

SEQUENCE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US95/14659

FILING DATE: April 7, 1995

CLASSIFICATION:

ATTORNEY/AGENT INFORMATION:

NAME: Musting, Ann M.

REGISTRATION NUMBER: 33,977

REFERENCE/DOCKET NUMBER: 600-226-US-01

TELECOMMUNICATION INFORMATION:

TELEPHONE: 612-339-3031

TELEFAX: 612-339-3061

INFORMATION FOR SEQ ID NO: 17:

SEQUENCE CHARACTERISTICS:

SEQUENCE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US95/14659

FILING DATE: April 7, 1995

CLASSIFICATION:

ATTORNEY/AGENT INFORMATION:

NAME: Musting, Ann M.

REGISTRATION NUMBER: 33,977

REFERENCE/DOCKET NUMBER: 600-226-US-01

TELECOMMUNICATION INFORMATION:

TELEPHONE: 612-339-3031

TELEFAX: 612-339-3061

INFORMATION FOR SEQ ID NO: 18:

SEQUENCE CHARACTERISTICS:

SEQUENCE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US95/14659

FILING DATE: April 7, 1995

TOPOLOGY: linear

US-08-179-574-1

Query Match 96.3%; Score 210; DB 1; Length 42;
 Best Local Similarity 97.6%; Pred. No. 1e-23;
 Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 DAERFRHDSGEVHQLVFFAGDVGNSKGAIIGLMVGGVIA 42
 Db 1 DAEFRHDSGEVHQLVFFAGDVGNSKGAIIGLMVGGVIA 42

RESULT 5

US-08-347-144-1

Sequence 1 Application US/08347144
 Patent No. 5589154

GENERAL INFORMATION:

APPLICANT: ANDERSON, STEPHEN

TITLE OF INVENTION: METHODS FOR THE PREVENTION AND TREATMENT

OF VASCULAR HEMORRHAGING AND ALZHEIMER'S DISEASE

NUMBER OF SEQUENCES: 19
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: American Cyanamid Company

STREET: One Cyanamid Plaza
 CITY: Wayne
 STATE: New Jersey
 COUNTRY: United States
 ZIP: 07470-8426

COMPUTER READABLE FORM:

COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/462,859A

CLASSIFICATION: 435

FILING DATE: 05-JUN-1995

ATTORNEY/AGENT INFORMATION:

NAME: Barnhard, Elizabeth M.

REGISTRATION NUMBER: 31,088

REFERENCE/DOCKET NUMBER: 31,844-04

TELECOMMUNICATION INFORMATION:

TELEPHONE: (201)831-3246

TELEFAX: (201)831-3305

INFORMATION FOR SEQ ID NO: 19:

SEQUENCE CHARACTERISTICS:

LENGTH: 42 amino acids

TYPE: amino acid

STRANDEDNESS:

TOPOLOGY: linear

MOLECULE TYPE: protein

US-08-462-859A-19

RESULT 6

US-08-123-659A-19

Sequence 19, Application US/08123659A

Patent No. 5656477

GENERAL INFORMATION:

APPLICANT: Vittek, M. P.

TITLE OF INVENTION: No. 5656477el Amyloid Precursor and Method of

Title of Invention: Using Same to Access Agents Which Down-Regulate Formation

NUMBER OF SEQUENCES: 19

CORRESPONDENCE ADDRESS:

ADDRESSEE: Anne Rosenblum

STREET: 163 Delaware Avenue, Suite 212

CITY: Delmar

STATE: New York

COUNTRY: U.S.A.

ZIP: 12054

COMPUTER READABLE FORM:

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/123,659A

FILING DATE: 20-SEP-1993

CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:

NAME: Rosenblum, Anne M.

REGISTRATION NUMBER: 30,419

Query Match 96.3%; Score 210; DB 1; Length 42;
 Best Local Similarity 97.6%; Pred. No. 1e-23;
 Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 DAEFRHDSGEVHQLVFFAGDVGNSKGAIIGLMVGGVIA 42
 Db 1 DAEFRHDSGEVHQLVFFAGDVGNSKGAIIGLMVGGVIA 42

RESULT 7

US-08-347-144-1

Sequence 1 Application US/08347144
 Patent No. 5589154

GENERAL INFORMATION:

APPLICANT: Jacobson, J. S.

TITLE OF INVENTION: No. 5589154el Amyloid Precursor and Method of

Title of Invention: Using Same to Access Agents Which Down-Regulate Formation

NUMBER OF SEQUENCES: 19

CORRESPONDENCE ADDRESS:

ADDRESSEE: Anne Rosenblum

STREET: 163 Delaware Avenue, Suite 212

CITY: Delmar

STATE: New York

COUNTRY: U.S.A.

ZIP: 12054

COMPUTER READABLE FORM:

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/123,659A

FILING DATE: 20-SEP-1993

CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:

NAME: Rosenblum, Anne M.

REGISTRATION NUMBER: 30,419

Query Match 96.3%; Score 210; DB 1; Length 42;
 Best Local Similarity 97.6%; Pred. No. 1e-23;
 Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 DAEFRHDSGEVHQLVFFAGDVGNSKGAIIGLMVGGVIA 42
 Db 1 DAEFRHDSGEVHQLVFFAGDVGNSKGAIIGLMVGGVIA 42

RESULT 6

US-08-462-859A-19

Sequence 19, Application US/08462859A

Patent No. 5652092

GENERAL INFORMATION:

APPLICANT: Jacobson, J. S.

APPLICANT: Vittek, M. P.

TITLE OF INVENTION: No. 5652092el Amyloid Precursor and Method of

Title of Invention: Using Same to Access Agents Which Down-Regulate Formation

REFERENCE/DOCKET NUMBER: 31,844-01
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (518)475-0611
 TELEFAX: (518)475-0619

INFORMATION FOR SEQ ID NO: 19:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 42 amino acids
 TYPE: amino acid
 TOPOLOGY: linear
 MOLECULE TYPE: protein

US-08-123-659A-19
 Query Match 96.3%; Score 210; DB 1; Length 42;
 Best Local Similarity 97.6%; Pred. No. 1e-23; 0; Mismatches 41; Conservatve 0; Indels 1; Gaps 0; Gaps 0;

RESULT 8
 US-08-464-247A-19
 Sequence 19, Application US/08464247A
 GENERAL INFORMATION:
 APPLICANT: Jacobson, J. S.
 APPLICANT: Vitek, M. P.
 TITLE OF INVENTION: No. 5633478el Amyloid Precursor and Method of
 TITLE OF INVENTION: Using Same to Access Agents Which Down-Regulate Formation
 TITLE OF INVENTION: of B-Amyloid Peptide
 NUMBER OF SEQUENCES: 19
 ADDRESSEE: American Cyanamid Company
 STREET: One Cyanamid Drive
 CITY: Wayne
 STATE: New Jersey
 COUNTRY: United States
 ZIP: 07470-8426

COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: Patent in Release #11.0, Version #1.30

CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/464,248A
 FILING DATE: 05-JUN-1995
 CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:
 NAME: Barnhard, Elizabeth M.
 REGISTRATION NUMBER: 31,088
 REFERENCE/DOCKET NUMBER: 31,844-02

TELECOMMUNICATION INFORMATION:
 TELEPHONE: (201)831-3246
 TELEFAX: (201)831-3305

INFORMATION FOR SEQ ID NO: 19:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 42 amino acids
 TYPE: amino acid
 STRANDEDNESS:
 TOPOLOGY: linear
 MOLECULE TYPE: protein

US-08-464-248A-19
 Query Match 96.3%; Score 210; DB 1; Length 42;
 Best Local Similarity 97.6%; Pred. No. 1e-23; 0; Mismatches 41; Conservatve 0; Indels 1; Gaps 0; Gaps 0;

RESULT 9
 US-08-464-248A-19
 Sequence 19, Application US/08464248A
 GENERAL INFORMATION:
 APPLICANT: Vitek, M. P.
 TITLE OF INVENTION: No. 5703209el Amyloid Precursor and Method of
 TITLE OF INVENTION: Using Same to Access Agents Which Down-Regulate Formation
 TITLE OF INVENTION: of B-Amyloid Peptide
 NUMBER OF SEQUENCES: 19
 ADDRESSEE: American Cyanamid Company
 STREET: One Cyanamid Plaza
 CITY: Wayne
 STATE: New Jersey
 COUNTRY: United States
 ZIP: 07470-8426

COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: Patent in Release #11.0, Version #1.30

CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/464,248A
 FILING DATE: 05-JUN-1995
 CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:
 NAME: Barnhard, Elizabeth M.
 REGISTRATION NUMBER: 31,088
 REFERENCE/DOCKET NUMBER: 31,844-02

TELECOMMUNICATION INFORMATION:
 TELEPHONE: (201)831-3246
 TELEFAX: (201)831-3305

INFORMATION FOR SEQ ID NO: 19:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 42 amino acids
 TYPE: amino acid
 STRANDEDNESS:
 TOPOLOGY: linear
 MOLECULE TYPE: protein

US-08-464-248A-19
 Query Match 96.3%; Score 210; DB 1; Length 42;
 Best Local Similarity 97.6%; Pred. No. 1e-23; 0; Mismatches 41; Conservatve 0; Indels 1; Gaps 0; Gaps 0;

RESULT 10
 US-08-476-466A-1
 Sequence 1, Application US/08476464A
 GENERAL INFORMATION:
 APPLICANT: RYDLE, RUSSELL E.
 APPLICANT: DAPEN, MICHAEL S.
 TITLE OF INVENTION: THERAPEUTIC INHIBITION OF PHOSPHOLIPASE
 TITLE OF INVENTION: A2 IN A-BETA PEPTIDE-MEDIATED NEURODEGENERATIVE DISEASE
 NUMBER OF SEQUENCES: 2
 ADDRESSEE: TOWNSEND & TOWNSEND & CREW LLP
 STREET: TWO BERNACADERO CENTER, 8TH FLOOR
 CITY: SAN FRANCISCO
 STATE: CALIFORNIA
 COUNTRY: U.S.A.
 ZIP: 94111-3834

COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS

Query Match 96.3%; Score 210; DB 1; Length 42;
 Best Local Similarity 97.6%; Pred. No. 1e-23; 0; Mismatches 41; Conservatve 0; Indels 1; Gaps 0; Gaps 0;

QY 1 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGGVIA 42
 Db 1 DAEFRHDSGYEVHQLVFFAGDVGSNKGAIIGLMVGGVIA 42

SOFTWARE: PatentIn Release #1.0, Version #1.30
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/476,464A
 FILING DATE: 07-JUN-1995
 CLASSIFICATION: 514
 ATTORNEY/AGENT INFORMATION:
 NAME: STORELLA, JOHN R.
 REGISTRATION NUMBER: 32,944
 REFERENCE/DOCKET NUMBER: 15270-002300
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (415)326-2400
 TELEFAX: (415)576-0300
 INFORMATION FOR SEQ ID NO: 1:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 42 amino acids
 TYPE: amino acid
 STRANDEDNESS: linear
 TOPOLOGY: linear
 MOLECULE TYPE: peptide
 ; US-08-476-464A-1

Query Match 96.3%; Score 210; DB 1; Length 42;
 Best Local Similarity 97.6%; Pred. No. 1e-23;
 Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 Qy 1 DAEFRHDSGYEVHQKLVFFAGDVGSNKGAIIGLMVGGVIA 42
 Db 1 DAEFRHDSGYEVHQKLVFFAGDVGSNKGAIIGLMVGGVIA 42

RESULT 11
 US-08-304-585-2
 ; Sequence 2, Application US/08304585
 ; Patent No. 5721106
 ; GENERAL INFORMATION:
 ; APPLICANT: MAGGIO, John B.
 ; APPLICANT: Mancin, Patrick W.
 ; TITLE OF INVENTION: LABELLED BETA-AMYLOID PEPTIDE AND
 ; NUMBER OF INVENTION: METHODS FOR USE IN DETECTING ALZHEIMER'S DISEASE
 ; NUMBER OF SEQUENCES: 12
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESS: Muetting, Raasch, Gebhardt & Schwappach, P.A.
 ; STREET: P.O. Box 581415
 ; CITY: Minneapolis
 ; STATE: MN
 ; COUNTRY: USA
 ; ZIP: 55458-1415
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: FLOPPY disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: PatentIn Release #1.0, Version #1.30
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/304,585
 ; FILING DATE: 12-SEP-1994
 ; CLASSIFICATION: 435
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Muetting, Ann M.
 ; REGISTRATION NUMBER: 33,977
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: 612-305-1217
 ; TELEFAX: 612-305-1228
 ; INFORMATION FOR SEQ ID NO: 2:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 42 amino acids
 ; TYPE: amino acid
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: peptide
 ; HYPOTHETICAL: NO
 ; ANTI-SENSE: NO
 ; FRAGMENT TYPE: N-terminal
 ; ORIGINAL SOURCE:
 ; US-08-302-808-5

Query Match 96.3%; Score 210; DB 1; Length 42;
 Best Local Similarity 97.6%; Pred. No. 1e-23;
 Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 Qy 1 DAEFRHDSGYEVHQKLVFFAGDVGSNKGAIIGLMVGGVIA 42

RESULT 12
 US-08-302-808-5
 ; Sequence 5, Application US/08302808
 ; Patent No. 5750419
 ; GENERAL INFORMATION:
 ; APPLICANT: SUZUKI, No. 5750349uhiro
 ; APPLICANT: ODAKA, Asano
 ; APPLICANT: KITADA, Chieko
 ; TITLE OF INVENTION: ANTIBODIES TO B-AMYLOIDS OR THEIR
 ; NUMBER OF SEQUENCES: 14
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: DIKE, BRONSTEIN, ROBERTS & CUSHMAN
 ; STREET: 130 WATER STREET
 ; CITY: BOSTON
 ; STATE: MA
 ; COUNTRY: USA
 ; ZIP: 02019
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Diskette
 ; COMPUTER: IBM Compatible
 ; OPERATING SYSTEM: DOS
 ; SOFTWARE: FastSEQ Version 1.5
 ; CURRENT APPLICATION DATA:
 ; FILING DATE: 24-JAN-1994
 ; APPLICATION NUMBER: US/08/302,808
 ; FILING DATE: 15-SEP-1994
 ; CLASSIFICATION: 435
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: PCT/JP94/00089
 ; FILING DATE: 25-JAN-1993
 ; APPLICATION NUMBER: 010132/1993
 ; FILING DATE: 05-FEB-1993
 ; APPLICATION NUMBER: 286905/1993
 ; FILING DATE: 16-NOV-1993
 ; APPLICATION NUMBER: 344773/1993
 ; FILING DATE: 28-DEC-1993
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: DAVID, RESNICK S.
 ; REGISTRATION NUMBER: 34,235
 ; REFERENCE/DOCKET NUMBER: 44631
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: 617-523-3400
 ; TELEFAX: 617-523-6440
 ; TELKA: 20021 STRB
 ; INFORMATION FOR SEQ ID NO: 5:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 42 amino acids
 ; TYPE: amino acid
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: peptide
 ; HYPOTHETICAL: NO
 ; ANTI-SENSE: NO
 ; FRAGMENT TYPE: N-terminal
 ; ORIGINAL SOURCE:
 ; US-08-302-808-5

Query Match 96.3%; Score 210; DB 1; Length 42;
 Best Local Similarity 97.6%; Pred. No. 1e-23;
 Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 1 DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVIA 42

RESULT 13

US-08-348A-1

Patent No. 5750374

GENERAL INFORMATION:

APPLICANT: Bobell, Heinz

APPLICANT: Draeger, Nicholas

APPLICANT: Trottman, Gerda H

APPLICANT: Jakob, Peter

APPLICANT: Stuber, Dietrich

TITLE OF INVENTION: Process for Producing Hydrophobic

TITLE OF INVENTION: Polypeptides and Proteins, and Fusion Proteins for Use in

TITLE OF INVENTION: Producing Same

NUMBER OF SEQUENCES: 12

CORRESPONDENCE ADDRESS:

ADDRESSEE: Hoffmann-La Roche Inc.

STREET: 340 Kingsland Street

CITY: Nutley

STATE: New Jersey

COUNTRY: U.S.A.

ZIP: 07110

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent In Release #1.0, version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/433,734

FILING DATE: 03-MAY-1995

CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:

NAME: Musting, Ann M.

REGISTRATION NUMBER: 33,977

APPLICATION/DOCKET NUMBER: 110,000,010102

TELECOMMUNICATION INFORMATION:

TELEPHONE: 612-305-1220

TELEFAX: 612-305-1228

INFORMATION FOR SEQ ID NO: 2:

SEQUENCE CHARACTERISTICS:

LENGTH: 42 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

US-08-433-734-2

RESULT 15

US-08-09-090-9

Sequence 9, Application US/08609090

; Patent No. 5840838

GENERAL INFORMATION:

APPLICANT: HENSLY, Kenneth

APPLICANT: BUTTERFIELD, D. A.

APPLICANT: CARNEY, John M.

APPLICANT: AKSENOV, Michael

TITLE OF INVENTION: A PROCESS FOR ENHANCING THE ACTIVITY OF

TITLE OF INVENTION: AN OLIGOPEPTIDE OR POLYPEPTIDES

NUMBER OF SEQUENCES: 11

CORRESPONDENCE ADDRESS:

ADDRESSEE: LOWE PRICE LEBLANC & BRCKER

STREET: 99 Canal Center Plaza, Suite 300

CITY: Alexandria

STATE: Virginia

COUNTRY: USA

ZIP: 22314

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent In Release #1.0, version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/609,090

FILING DATE: 29-FEB-1996

CLASSIFICATION: 530

ATTORNEY/AGENT INFORMATION:

NAME: KRAUS, Eric J.

REGISTRATION NUMBER: 36,190

REFERENCE/DOCKET NUMBER: 434-059

TELECOMMUNICATION INFORMATION:

TELEPHONE: 703-684-1111

TELEFAX: 703-684-1124

INFORMATION FOR SEQ ID NO: 9:

SEQUENCE CHARACTERISTICS:

LENGTH: 42 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLogy: linear

MOLECULE TYPE: peptide

US-08-609-090-9

Query Match Similarity 96.3%; Score 210; DB 2; Length 42;
Best Local Similarity 97.6%; Pred. No. 1e-23; Matches 41; Mismatches 0; Indels 1; Gaps 0;

Matches 41; Conservative 0; Mi Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHKQLVFFAGDVGSNKGAIIGLMVGGVIA 42

Db 1 DAEFRHDSGYEVHKQLVFFAGDVGSNKGAIIGLMVGGVIA 42

Search completed: November 19, 2004, 16:04:03
Job time : 44 secs

CC This invention relates to the use of a non-wild type protofibril or
 CC compound(s) with protofibril forming ability for immunisation of
 CC individuals and prevention or treatment of Alzheimer's disease. The
 CC protofibril compound of the invention is useful for preventing or
 CC treating Alzheimer's disease. A compound with protofibril forming ability
 CC is useful for high throughput screening to find substances with anti-
 CC protofibrillar activity. A peptide, amyloid β (Abeta)-Arc is useful for
 CC pharmaceutical, diagnostic or research purposes. Amyloid β peptide is
 CC a cleavage product of the amyloid precursor protein (APP), the Abeta
 CC peptide can aggregate to form amyloid plaques that are hallmark of
 CC Alzheimer's disease. Abeta-Arc is an Abeta peptide containing the Arctic
 CC mutation (Glu-Gly at position 22 of the peptide). A host cell comprising
 CC a vector encoding (Abeta)-Arc is useful to produce the recombinant
 peptide. A transgenic, non-human animal expressing this peptide may be
 CC useful for pharmaceutical screening and in disease models for
 CC neurodegenerative diseases and amyloid precursor protein biochemistry.
 CC Antibodies are useful for vaccination for the prevention and treatment of
 CC Alzheimer's disease. The (Abeta)-Arc peptide has enhanced protofibril
 CC forming ability and/or enhanced immunogenicity compared to the wild-type
 CC counterparts. The present sequence represents the (Abeta)-Arc peptide of
 CC the invention

SQ Sequence 42 AA;

Query Match 100.0%; Score 218; DB 5; Length 42;
 Best Local Similarity 100.0%; Pred. No. 4. 6e-23;
 Matches 42; Conservat 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 DAEFRHDSGYEVHQKLVFFAGDGVGSNKGAIIGLMVGWVIA 42
 Db 1 DAEFRHDSGYEVHQKLVFFAGDGVGSNKGAIIGLMVGWVIA 42

RESULT 2

ABP97889
 ID ABP97889 standard; peptide; 42 AA.

AC ABP97889;

XX DT 03-JUN-2003 (first entry)

DB Amino acid sequence of human 22G-A-beta1-42 (Arctic) mutant peptide.
 XX KW Amyloid precursor protein; β -beta peptide; angiogenesis; psoriasis;
 KW angiogenesis-mediated disease; cancer; arthritis; atherosclerosis;
 KW macular degeneration; diabetic retinopathy; Alzheimer's disease;
 KW cerebral amyloid angiopathy; cerebrovascular disease; brain injury.
 OS Homo sapiens.

XX PN WO2003014329-A2.

XX PD 20-FEB-2003.

XX PR 12-AUG-2002; 2002WO-US027040.

PR 10-AUG-2001; 2001US-0311656P.

XX PR (UYSF-) UNIV SOUTH FLORIDA.

XX PT Paris D, Mullan M;
 XX DR WPI; 2003-256578/25.

XX PT Inhibiting angiogenesis, and preventing or alleviating the symptoms of an
 PT angiogenesis-mediated disease, e.g. cancer, arthritis or atherosclerosis,
 PT comprises increasing in vivo concentrations of an β -beta peptide in the
 PT patient.

PS Claim 3; Page 13; 85pp; English.

CC The present sequence represents a peptide derived from amyloid precursor
 CC protein, and designated 22G-A-beta1-42 (Arctic) mutant peptide. A-beta

CC peptides are used in the method of the invention. The specification
 CC describes a method of inhibiting angiogenesis and preventing or
 CC alleviating the symptoms of an angiogenesis-mediated disease in a
 CC patient. The method comprises increasing *in vivo* concentrations of an β -
 CC peptide within the patient. The β -beta peptides are useful for
 preventing or alleviating angiogenesis-mediated diseases such as cancer,
 CC arthritis, atherosclerosis, psoriasis, macular degeneration and diabetic
 CC retinopathy. β -beta peptide antagonists may be used to treat Alzheimer's
 CC disease, cerebral amyloid angiopathy, cerebrovascular disease in the
 CC presence of Alzheimer's disease, or traumatic brain injury

SQ Sequence 42 AA;

Query Match 100.0%; Score 218; DB 6; Length 42;
 Best Local Similarity 100.0%; Pred. No. 4. 6e-23;
 Matches 42; Conservat 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 DAEFRHDSGYEVHQKLVFFAGDGVGSNKGAIIGLMVGWVIA 42
 Db 1 DAEFRHDSGYEVHQKLVFFAGDGVGSNKGAIIGLMVGWVIA 42

RESULT 3

AAR20330

AAR20330 standard; peptide; 42 AA.

AC AAR20330;

XX DT 25-MAR-2003 (revised)

DT 14-APR-1992 (first entry)

DB Sequence of A99 (β -amyloid core domain).

XX KW Transgenic mice; Alzheimer's disease; diagnosis; beta-amyloid precursor;

XX OS Homo sapiens.

XX PN WO9119810-A.

XX PD 26-DEC-1991.

XX PR 15-JUN-1990; 900US-00538857.

XX PR 15-JUN-1990; 900US-00538857.

XX PR 17-JUN-1991; 91US-00716725.

XX PA (CALD) CALIFORNIA BIOTECHNOLOGY INC.

XX PI Cordell B;

XX DR WPI; 1992-024426/03.

XX PT Transgenic mice as models for studying Alzheimer's disease protein B -

PT contg. cells with promoter and beta-amyloid precursor protein

PT deoxyribonucleic acid, useful for testing anti-alzheimer's drugs.

XX PS Disclosure; Fig 3; 98pp; English.

XX CC The inventors specifically claim transgenic mice contg. DNA encoding A42

CC (beta-amyloid precursor protein) (AAR20330), A99 (beta-amyloid carboxy

CC tail) (AAR20329), A695 (beta-amyloid precursor protein), A751 (precursor

CC plus inhibitor) or A41 (protease inhibitor) (AAR20328). Human fibroblast

CC cDNA clone LambdaAPCR16814 was deposited at ATCC on July 1, 1987 and has

CC accession No. 40347. The promoter is pEF, the NSE promoter with the A751

CC or the A695 sequence. (Updated on 25-MAR-2003 to correct PR field.)
 XX (Updated on 25-MAR-2003 to correct PR field.)
 XX Sequence 42 AA;

Query Match 96.3%; Score 210; DB 2; Length 42;
 Best Local Similarity 97.6%; Pred. No. 6. 1e-22;

Matches 41; Conservat 0; Mismatches 1; Indels 0; Gaps 0;

QY	1 DAEFRHDSGYEVHHQKLVFFAGDVGSNKGAIIGLMVGGVIA 42	XX	Beta/A4-amyloid peptide; tissue plasminogen activator; KW
Db	1 DAEFRHDSGYEVHHQKLVFFAGDVGSNKGAIIGLMVGGVIA 42	XX	Alzheimer's disease; stimulation; pathogenesis; hereditary cerebral hemorrhage with amyloidosis-Dutch type; control; cerebral amyloid angiopathy; cerebral; hemorrhage; hemorrhage.
RESULT 4		XX	
ID	AAR60366	XX	
XX	AAR60366 standard; peptide; 42 AA.	XX	
AC	AAR60366;	XX	
XX		XX	
DT	25-MAR-2003 (revised)	XX	
XX	15-MAR-1995 (first entry)	XX	
DE	Beta-amyloid (1-42).	XX	
XX		XX	
KW	Amyloid precursor protein; APP; Alzheimer's disease; beta-amyloid; anti-beta-amyloid antibody; diagnosis.	XX	
KW		XX	
OS	Homo sapiens.	OS	
XX		XX	
PN	W09417197-A1.	PN	
XX		XX	
PN	W09417197-A1.	PN	
XX		XX	
PD	04-AUG-1994.	PD	
XX		XX	
PR	24-JAN-1994; 94WO-JP000089.	PR	
XX		XX	
PR	25-JAN-1993; 93JP-00010132.	PR	
XX		XX	
PR	16-NOV-1993; 93JP-00019035.	PR	
XX		XX	
PR	28-DEC-1993; 93JP-00334773.	PR	
XX		XX	
PA	(TAKE) TAKEDA CHEM IND LTD.	PA	
XX		XX	
PT	Suzuki N, Odaka A, Kitada C;	PT	
XX		XX	
DR	WPI: 1996-268332/27.	DR	
XX		XX	
PT	Antibodies recognising specific parts of beta-amyloid - can be used for PT diagnosis of diseases implicating beta-amyloid, such as Alzheimer's disease.	PT	
XX		XX	
PS	Disclosure; Page 03; 116pp; Japanese.	PS	
XX		XX	
CC	Antibodies which recognise specific subfragments of the beta-amyloid protein are claimed. Specifically, the antibodies (which are pref. monoclonal) recognise residues 1-16 and/or 1-28 from the N-terminal portion of beta-amyloid or they recognise residues 25-35 or 35-43 from the C-terminal portion. The antibodies are useful for assaying beta-amyloid and its derivatives for diagnosis of Alzheimer's disease. (Updated on 25-MAR-2003 to correct PN field.)	CC	
CC		CC	
CC	Sequence 42 AA;	CC	
XX		XX	
SQ	Query Match 96.3%; Score 210; DB 2; Length 42; Best Local Similarity 97.6%; Pred. No. 6.1e-22; Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;	SQ	
XX		XX	
XX	Query Match 96.3%; Score 210; DB 2; Length 42; Best Local Similarity 97.6%; Pred. No. 6.1e-22; Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;	Query Match 96.3%; Score 210; DB 2; Length 42; Best Local Similarity 97.6%; Pred. No. 6.1e-22; Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;	Query Match 96.3%; Score 210; DB 2; Length 42; Best Local Similarity 97.6%; Pred. No. 6.1e-22; Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
XX		XX	
XX	1 DAEFRHDSGYEVHHQKLVFFAGDVGSNKGAIIGLMVGGVIA 42	1 DAEFRHDSGYEVHHQKLVFFAGDVGSNKGAIIGLMVGGVIA 42	1 DAEFRHDSGYEVHHQKLVFFAGDVGSNKGAIIGLMVGGVIA 42
Db	1 DAEFRHDSGYEVHHQKLVFFAGDVGSNKGAIIGLMVGGVIA 42	Db	1 DAEFRHDSGYEVHHQKLVFFAGDVGSNKGAIIGLMVGGVIA 42
XX		XX	
RESULT 5		RESULT 6	
ID	AAR95248	ID	AAR94591
XX	AAR95248 standard; peptide; 42 AA.	XX	AAR94591 standard; peptide; 42 AA.
AC	AAR95248;	AC	AAR94591;
XX		XX	
DT	20-JAN-1997 (first entry)	DT	25-MAR-2003 (revised)
XX		XX	
DB		DT	21-AUG-1996 (first entry)
XX		XX	
DE	Alzheimer amyloid beta-protein active site sequence.	DE	
XX		XX	
KW	Beta-amyloid; Alzheimer's disease; cholinesterase; lipase; elastase; serine protease; para-aminophenylmethanesulphonyl fluoride; inhibition; complex formation; alpha(1)-antichymotrypsin; Down's disease; aging.	KW	
XX		XX	
OS	Synthetic.	OS	
XX		XX	
PN	US550697-A.	PN	
XX		XX	

PD 09-APR-1996.
 XX
 PF 10-JAN-1994; 94US-00179574.
 XX
 PR 24-AUG-1990; 90US-00572671.
 PR 13-JAN-1992; 92US-00819361.
 PR 13-JAN-1993; 93WO-US000325.
 XX
 (HARD) HARVARD COLLEGE.
 XX
 PI Kayyali U, Potter H;
 XX
 DR WPI; 1996-200270/20.
 XX
 PT Inhibiting enzymatic activity of Alzheimer amyloid beta-protein - using β -amidino:phenyl:methanesulphonyl fluoride or ebselactone λ , for treatment, study and diagnosis of Alzheimer's disease, etc.
 XX
 PS Disclosure; Fig 1; 17pp; English.
 CC This is the sequence of a fragment of the beta-amyloid protein associated with Alzheimer's disease. The protein contains esterase (cholinesterase and lipase) activities based on active site similarities with serine proteases (see AAK4593-96). The esterase activity of the beta-amyloid protein 1 inhibited by the cpds. of the invention, i.e. ebselactone λ or para-aminodiphenylmethanesulphonyl fluoride. Inhibition of those activities prevent complex formation between the beta-amyloid and alpha(1)-antichymotrypsin, thus can be used to treat, study or diagnose Alzheimer's or Down's disease or normal ageing. (Updated on 25-MAR-2003 to correct PCT field.)
 CC
 CC Sequence 42 AA;
 XX
 Query Match 95.3%; Score 210; DB 2; Length 42;
 CC Best Local Similarity 97.6%; Pred. No. 6.1e-22;
 CC Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 CC QY 1 DAEFRHDSGYEVHHQKLVFFAGDVGNSKGAIIGLMVGGVIA 42
 CC Db 1 DAEFRHDSGYEVHHQKLVFFAGDVGNSKGAIIGLMVGGVIA 42
 XX
 RESULT 7
 AAW12828
 ID AAW12828 standard; peptide; 42 AA.
 XX
 AC AAW12828;
 XX
 DT 08-DEC-1997 (first entry)
 DE Beta A4 Peptide.
 XX
 KW Beta A4 Peptide; alzheimer's disease; peptide aggregation; brain; therapy; inhibitor.
 KW
 OS Homo sapiens.
 OS
 PN WO9707403-A1.
 XX
 PR 23-JUL-1996; 96WO-US012034.
 XX
 PR 16-AUG-1995; 95US-00515605.
 XX
 (HMR) HOECHST MARION ROUSSEL INC.
 XX
 PI Goyal S, Paul J, Riedel NG, Sahasrabudhe SR;
 XX
 DR WPI; 1997-165447/15.
 XX
 PT Determin. of the degree of betaa4 peptide aggregation using binding agent - used to screen cpds. for possible use in Alzheimer's disease treatment.
 XX
 PS Disclosure; Page 10; 18pp; English.
 CC This sequence represents the beta A4 peptide. The degree of aggregation of this peptide is determined using the method of the invention. The beta A4 peptide is present in the brain of Alzheimer's disease patients, but not in the brain of non-Alzheimer's disease individuals. The Peptide clumps or aggregates in the brain of Alzheimer's disease patients, where it may be responsible for the destruction of normal brain cells. Once the clumps or aggregates form, the formulation is almost irreversible. The method of the invention comprises reacting this sequence with a binding reagent capable of binding to it only in its non-aggregated state, to form an amount of a beta A4 peptide bound reagent and an amount of protein free reagent. The amount of the beta A4 peptide, binding reagent complex is then measured. Compounds which inhibit aggregation of beta A4 peptide are potentially useful for treatment of Alzheimer's disease
 CC
 CC Sequence 42 AA;
 XX
 Query Match 96.3%; Score 210; DB 2; Length 42;
 CC Best Local Similarity 97.6%; Pred. No. 6.1e-22;
 CC Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 CC QY 1 DAEFRHDSGYEVHHQKLVFFAGDVGNSKGAIIGLMVGGVIA 42
 CC Db 1 DAEFRHDSGYEVHHQKLVFFAGDVGNSKGAIIGLMVGGVIA 42
 XX
 RESULT 8
 AAW64507
 ID AAW64507 standard; peptide; 42 AA.
 XX
 AC AAW64507;
 XX
 DT 20-OCT-1998 (first entry)
 DE Neurotoxic beta-amyloid peptide decoy peptide #20.
 XX
 KW Beta-amyloid peptide; beta-AP; neuropeptide; neurotoxin; calcium influx; aggregate; Alzheimers disease; decoy; treatment.
 XX
 OS Synthetic.
 XX
 PN WO9830229-A1.
 XX
 PR 09-JAN-1998; 98WO-US000053.
 XX
 PR 10-JAN-1997; 97US-0035847P.
 PR 29-OCT-1997; 97US-00960188.
 XX
 (MASI) MASSACHUSETTS INST TECHNOLOGY.
 XX
 PI Ingram VM, Blanchard BJ;
 XX
 DR WPI; 1998-398795/34.
 XX
 PT Inhibition of aggregation of, e.g. beta-amyloid peptide - by administering decoy peptide or other calcium-influx inhibitor, useful for, e.g. treating Alzheimer's disease.
 XX
 PT Example 8; Page 46; 68pp; English.
 XX
 CC AAW64488-W64517 are decoy peptides that bind to a neurotoxic beta-amyloid peptide (beta-AP) and reduces the ability of beta-AP's to form aggregates that increase calcium influx into neuronal cells. Such Peptides can be used in the treatment of diseases associated with neurotoxic aggregates of beta-AP specifically Alzheimer's disease. The peptides are administered at 0.001-1000 (especially 0.2-20) mg/kg, by injection and orally, or from slow-release implants
 CC
 CC Sequence 42 AA;

Best Local Similarity 97.6%; Pred. No. 6.1e-22; Mismatches 41; Conservative 0; Indels 0; Gaps 0; Matches 41; DB 1; AC 0; Mismatches 1; Gaps 0; Sequence 42 AA;

Query Match 96.3%; Score 210; DB 2; Length 42; Best Local Similarity 97.6%; Pred. No. 6.1e-22; Mismatches 41; Conservative 0; Indels 0; Gaps 0; Matches 41; DB 1; AC 0; Mismatches 1; Gaps 0; Sequence 42 AA;

QY 1 DAEFRHDSGYEVHHQKLVFFAGDVGSNKGAIIGLMVGGVIA 42
Db 1 DAEFRHDSGYEVHHQKLVFFAGDVGSNKGAIIGLMVGGVIA 42

RESULT 14
AAV08607
ID AAV08607 standard; protein; 42 AA.
XX
AC AAV08607;
XX DT 05-AUG-1999 (first entry)
XX Human beta-amyloid precursor core protein A42.
XX DB KW APP; beta-amyloid precursor protein; human; transgenic mice; pathology; Alzheimer's disease; model; therapeutic compound; brain; mechanism; nerve tissue specific promoter; synthesis; inhibitor; deposition; plaque formation; treatment; A42.
XX OS Homo sapiens.
XX PN US5912410-A.
XX PN XX
XX PD 15-JUN-1999.
XX PP 13-APR-1995; 95US-00422333.
XX PR 15-JUN-1990; 90US-00538857.
XX PR 17-JUN-1991; 91US-00716725.
XX PR 21-OCT-1994; 94US-00327381.
XX PA (SCTO-) SCIOS INC.
XX PT Cordell B;
XX PS Disclosure; Fig 3; 72pp; English.
XX DR WPI; 1999-357231/30.
XX PT Transgenic mice useful for studying compounds potentially useful in the treatment of Alzheimer's disease.
XX PS
XX DR
XX CC This invention describes novel transgenic mice expressing proteins related to the pathology of Alzheimer's disease and which provide models for studying potentially therapeutic compounds. The transgenic mice contain a DNA sequence encoding a beta-amyloid precursor protein (APP) and a nerve tissue specific promoter operably linked to the beta-APP allowing its expression to form beta-amyloid protein deposits in the animal's brain. The transgenic mouse is useful for elucidating the molecular mechanisms involved in the synthesis of and, more importantly, inhibiting the synthesis and deposition of beta-amyloid proteins (most importantly in the brain where plaque formation is associated with Alzheimer's disease) by inhibiting production and/or increasing cleavage after production. The transgenic animals provide useful models for studying the in vivo relationships of the proteins to each other and to other compounds being tested for their usefulness in treating Alzheimer's disease
XX SQ Sequence 42 AA;

Query Match 96.3%; Score 210; DB 2; Length 42; Best Local Similarity 97.6%; Pred. No. 6.1e-22; Mismatches 41; Conservative 0; Indels 0; Gaps 0; Matches 41; DB 1; AC 0; Mismatches 1; Gaps 0; Sequence 42 AA;

QY 1 DAEFRHDSGYEVHHQKLVFFAGDVGSNKGAIIGLMVGGVIA 42
Db 1 DAEFRHDSGYEVHHQKLVFFAGDVGSNKGAIIGLMVGGVIA 42

RESULT 15
ID AAM29093
XX AC AAM29093;
XX DT 20-JUL-1999 (first entry)
XX DB A-beta-binding peptide 1-42.
XX KW Cyclosporin; A-beta peptide; conjugate; neurological disease; Alzheimer; multiple sclerosis; amyotrophic lateral sclerosis; ALS; non-immunosuppressive; amyloid plaque formation.
XX OS Homo sapiens.
XX PN W09910374-A1.
XX PD 04-MAR-1999.
XX PR 25-AUG-1998; 98WO-US017544.
XX PR 26-AUG-1997; 97US-0057751P.
XX PA (WISC) WISCONSIN' ALUMNI RES FOUND.
XX PT Rich DH, Solomon ME;
XX DR WPI; 1999-276928/23.
XX PT New A-b beta-binding peptide conjugates and CSA analogs - useful in treatment of neurological diseases e.g. Alzheimer's disease, Multiple Sclerosis etc.
XX PT
XX PS Claim 5; Page 98; 129pp; English.
XX CC New conjugates are disclosed which are of formula A-Z, in which: A is (1) a cyclosporin A analogue described in AAM29087 or (2) an FK506 binding peptide inhibitor; and Z is a polypeptide comprising 5 or more contiguous residues of A-beta peptide. The compounds are novel chemical inducers of dimerization which are non-immunosuppressive and which are inhibitors of A-beta peptide aggregation and deposition in amyloid plaques. The adverse consequences of amyloid plaque formation can be prevented or ameliorated by sequestering the A-beta peptide in monomeric form with a conjugate which links the A-beta to cyclophilin or FK506, therefore providing a mechanism to minimize the amount of free A-beta available for fibril formation and deposition. The compounds can be used for the treatment of Alzheimer's disease, multiple sclerosis and amyotrophic lateral sclerosis
XX Sequence 42 AA;

Query Match 96.3%; Score 210; DB 2; Length 42; Best Local Similarity 97.6%; Pred. No. 6.1e-22; Mismatches 41; Conservative 0; Indels 0; Gaps 0; Matches 41; DB 1; AC 0; Mismatches 1; Gaps 0; Sequence 42 AA;

QY 1 DAEFRHDSGYEVHHQKLVFFAGDVGSNKGAIIGLMVGGVIA 42
Db 1 DAEFRHDSGYEVHHQKLVFFAGDVGSNKGAIIGLMVGGVIA 42

Search completed: November 19, 2004, 15:51:17
Job time : 156 secs

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